THE MARKETING OF FARM PRODUCTS

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THE MARKETING OF FARM PRODUCTS

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PREFACE

THIS book aims to set forth the fundamental principles of market distribution as applied to the marketing of agricultural products. It begins by pointing out the place that marketing occupies in the general field of economics, and by applying accepted economic principles to the marketing process. It then explains the general organization and methods of marketing, beginning with marketing at country points, and passes on to a description of the methods and functions of the various classes of wholesale dealers. After describing the factors affecting the cost of marketing, illustrated by data concerning the marketing of certain products, a number of special problems are treated, such as price quotations, transportation, future trading, inspection and grading, public markets, coöperative marketing, etc. The author has attempted to describe the marketing organism as it is, and has made no effort to propose any definite or comprehensive program for improvement; investigations of marketing practices have not proceeded far enough as yet to make any such program possible. It has also been the aim of the author to treat the subject, not from the point of view of any particular class of people interested in the problem, but as a dispassionate outsider who tries to get a comprehensive view of the whole subject.

Since this subject has been studied scientifically for such a short time, the present volume is offered with some misgivings. Within a few months after its appearance there will doubtless be many important contributions which will furnish data that might well be incorporated in such a volume, and which may make necessary the modification of some statements and conclusions contained herein. On the other hand, study of the subject has proceeded far enough to permit the presentation of much descriptive matter and the promulgation of many fundamental principles, which it is believed may at least be of assistance in furnishing a point of view and a guide for further investigations. Because of the astonishing misconceptions on the part of the general public, the author believes himself justified in presenting this volume without waiting for the appearance of additional material; furthermore he at least hopes that such material as may appear in the future may be corroborative rather than subversive of general principles set forth herein. He would welcome, however, such criticisms and suggestions as readers may care to offer.

References to authorities are infrequent in the following pages, first because there is so little literature of scientific value on the subject of marketing, and second because this book is largely the result of first-hand investigation on the part of the author. A bibliography containing the most important contributions to the subject appears at the end of the volume.

This volume has been made possible by the liberal and far-sighted policy of the authorities of the University of Minnesota, who realize the necessity of allowing

time and funds for research work in this important field; the author used the material and mode of presentation contained in this book in his courses in agricultural economics in the Minnesota College of Agriculture. He is particularly grateful to Dean Albert F. Woods of that college for his inspiring leadership. The author's position as Collaborator of the Office of Markets, United States Department of Agriculture, has also enabled him to undertake investigational work which has been helpful in studying the subject.

The author wishes to acknowledge the helpful advice and criticisms of Mr. Frank G. Urner, Vice-President of the Urner-Barry Company of New York City, of Professor H. C. Emery, and of Messrs. O. B. Jesness and G. P. Warber, both of the Office of Markets. He is also grateful to Miss Olga Axness, Chief Clerk of the Division of Agricultural Economics, University of Minnesota, for help in preparing manuscript. Acknowledgement should also be made of the liberal giving of time and information by numerous business men both through personal interview and correspondence.

L. D. H. WELD.

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THE MARKETING OF FARM PRODUCTS

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CHAPTER I

THE FUNDAMENTALS OF MARKETING

THE widespread interest in the marketing of farm products that has developed within the past few years in the United States is undoubtedly due largely to the unusual increase in prices since 1900. Computations based on statistics issued by the United States Bureau of Labor Statistics indicate that, considering the average from 1890 to 1899 as 100, retail prices of food had advanced to 154.2 in 1912, and weekly earnings of laborers to 131.6, so that the average purchasing power of wage earners in *1912 was only 85.3 per cent of what it was* during the decade 1890–99.[1] Until 1907, the advance in money wages corresponded fairly closely to the increase in prices, so that wage earners practically held their own; but since 1907 wages have increased at a slower rate than have prices, with the result that purchasing power has been decreasing. It is this condition which has had much to do with the interest in the cost of marketing, and which has lent significance to the

[1] Rubinow, The Recent Trend of Real Wages, *American Economic Review*, December, 1914, p. 811.

wide differences between the prices received by farmers and the prices paid by city consumers.

Although the general public has only recently become keenly interested in this subject, the farmers have long had their misgivings concerning the relation between farm prices and city retail prices. As early as during the agricultural unrest of the seventies, one of the important objects of the Patrons of Husbandry was to reduce the cost of marketing, both through coöperative purchase of supplies and disposal of products. The National Grange of to-day and many of the other farmers' organizations which followed in the wake of the remarkable Granger outburst of the seventies have had as one of their avowed purposes, the improvement of the methods of marketing.

Although the early attempts to reorganize the marketing system met with prompt and complete failure, the agitations resulted in some good through the passage of state laws, such as those governing warehouses, grain inspection, etc., in some of the Middle Western states. However, the general subject of marketing was not studied scientifically. The United States Industrial Commission of 1900 made a comprehensive and rather thoroughgoing investigation, and its report on this subject, though it awakened relatively little public interest at the time, stands out as a remarkable piece of work in view of the fact that so little had previously been done along this line. Aside from this, there is practically no source from which accurate information may be obtained as to the costs and methods of marketing in the past, although information on certain

points may be obtained from miscellaneous sources, such as court decisions, hearings and reports of the Interstate Commerce Commission, etc. The subject of speculation had also been admirably treated prior to the present awakening of interest.

The subject of marketing deserves the attention it is now receiving, and the frequent criticism that our state agricultural colleges have devoted relatively too much energy to teaching farmers how to raise more crops, and not enough to teaching how to market them, is largely justified. The study of marketing naturally falls to the lot of the economist. To make the necessary investigations of market practices, to classify the data collected, and to draw sound conclusions as to fundamental principles is not so easy as is commonly thought. Too many speakers and writers are making glaring statements without a sufficient foundation of knowledge, and without having a broad enough point of view to include the interests of all people concerned with the marketing process. To attack the problem rationally, and with a clear and comprehensive view, it is first necessary to understand the place that marketing occupies in our general economic system and to find out what the science of economics has to offer in the way of general laws which are helpful in solving the problems involved.

Marketing a Part of Production. — Professional economists usually divide the field of economic activity into three grand divisions, — production, distribution, and consumption. When it comes to locating the subject of marketing, or market distribution as it is frequently called, in its proper division, the nomenclature

used by economists is misleading, because marketing is a part of production, and not of distribution. Production is often defined as the creation of utilities; *i.e.* any process that makes a thing more useful, — either by molding it into a more desirable form in the factory, or by transporting it from one place where it is less needed to another place where it is more needed, or by storing it from one season of the year when it is less needed until another season when it is more needed, — is a productive process. Marketing clearly belongs in such a conception of production. Consumption, on the other hand, means the final using up of commodities, to satisfy human wants. The term "distribution," as used by economists, means the division of wealth among those who coöperate in producing it. One phase of the problem of distribution is that of the equitable division of wealth among wage earners, capitalists, and land owners. Socialists, for example, believe that wage earners as a class get less than their rightful share and that capitalists get more. Another question on the general problem of distribution is whether each individual of a class receives his rightful share. Among wage earners, for example, are differences in wages adjusted fairly to individual ability and efficiency?

This description of what economists call "distribution" has been given in order to indicate clearly why marketing is not a part of that division of economics. Because of the various meanings of the word "distribution," it might be better to avoid the use of the term altogether in referring to the subject with which this book deals. It is very important to realize fully that

marketing, whether we call it by that name, or whether we call it " market distribution," is a part of the productive process, and hence that those engaged in marketing are productive laborers, who add to the usefulness of commodities which they handle.

Kinds of Utility. — It has already been said that production may be defined as the creation of utilities. The classification of utilities into their various kinds is helpful in making clear the relation of the marketing process to other productive processes. Utilities may be divided into form, time, place, and possession utilities. Form utilities are created by changing the form of commodities, as in the manufacturing operation. Lumber is taken into a factory; it is sawed and cut into different shapes, and the shapes are fitted together into a chair or a table. Form utilities have been created, and the value of the lumber enhanced. The raising of agricultural products also falls into this class. Time utilities are created by holding or storing commodities from times that they are plentiful to times when they are scarce. The storage of ice from winter to summer is an example. Likewise the storage of eggs and butter, from times of surplus production to times of deficient production, results in an addition of usefulness, or time utility. Place utilities are created by carrying commodities from one place to another. The wheat of the American Northwest would be of little value if it could not be transported from that area of surplus production to the great centers of consumption. Possession utilities are created by the exchange of goods from the hands of one person to another.

From this analysis of utilities, it is apparent that

marketing deals primarily with the creation of time, place, and possession utilities. In fact production may be roughly divided into two great divisions, viz., manufacturing or crop raising on the one hand, and marketing on the other. Marketing begins where the manufacturing process ends. When goods emerge from the factory, or are harvested on the farm, the marketing process begins. Oftentimes, manufacturing processes intervene between marketing processes. Wool is a product of sheep raising and it has to be marketed to the woolen mill. The woolen mill manufactures it into cloth, and the cloth has to be marketed to the clothing manufacturer. The latter manufactures clothing, which has to be marketed to consumers. At each step an increment of value is added by those who handle or transform the product.

Unfortunately, economists, in studying production, have had in mind primarily the creation of form utilities. Division of labor, large-scale production, and other problems of the organization and methods of production have been studied mainly in connection with the manufacturing end. Likewise, agricultural economists have concerned themselves primarily with the raising of crops, farm management, feeding of animals, etc., and not to any great extent with the marketing of the products. Some beginnings have been made along this line within the past few years, but the marketing process has never been subjected to careful scientific analysis. And yet the marketing part of production is extremely important as compared with the manufacturing or crop-growing part. Comparison of factory or farm prices with final retail

prices of almost any commodity will prove this. The difference, sometimes called the "spread" or "differential," represents the cost of marketing, — or more properly, the cost and profits of marketing. In the case of farm products, at least, the profits normally constitute such a small proportion that it involves no great error to consider that these differentials represent the costs of marketing.

Lack of Knowledge on the Subject. — The failure on the part of economists to study marketing has resulted in a serious situation. Now that nation-wide interest has been aroused in the subject, there has been no authentic source to which one might turn for definite and impartial knowledge. As a result, many mistaken notions have been spread abroad, and the general public believes that there is something radically wrong with the whole marketing system, and that it is fundamentally defective. The field has been preëmpted largely by individuals with no scientific training, and so many misleading and absurd statements have been allowed to pass unchallenged by men who ought to be in a position to lead and influence public opinion, that it will take some time to bring the public into a sane frame of mind with regard to this vital part of our economic system. The agitation for investigation and for state and federal legislation has been led largely by politicians, and for this reason the dealers engaged in the wholesale produce trade are inclined to believe that the movement is purely a political agitation.[1] But this is far from being the

[1] This view was expressed again and again, for example, at the Annual Convention of the National League of Commission Merchants held at Detroit in January, 1915.

case, because as already pointed out, the general public believe that there is something fundamentally wrong.

The agitation has already resulted in definite steps to collect the information necessary to a correct understanding of the marketing problem. Many of the state universities, notably those of Minnesota and Wisconsin, have begun to make scientific investigations of the methods and costs of marketing. Many of the large cities of the country, notably New York City, have turned their attention to this problem. But the most important step is that taken by the Federal Government through the Office of Markets in the Department of Agriculture. This office had an appropriation of $200,000 for the year 1914–15, and has experts engaged in studying the methods of marketing different products. The most important source of detailed information on this subject in the future will undoubtedly be the reports issued by this office. Its activities are described more in detail in the last chapter.

Marketing of Manufactured Products. — One interesting feature of the growing interest in marketing problems is that it has centered so largely on the marketing of *agricultural products*, as distinct from ordinary *manufactured products*. The distinction is not very clear in some cases, because many staple food commodities, such as butter, flour, and live-stock products, have undergone manufacturing processes before becoming available for final consumption. In the main, however, the manufacturing processes, to which the great staples mentioned above are subjected, add increments of value which are relatively small as compared either with final retail

prices or with total differentials between producers' prices and final retail prices. In discussing the costs of marketing as represented by these differentials, however, the manufacturing costs, when they occur, should not be confounded with purely marketing costs.

It is only natural that public interest should center on the marketing of farm products for two reasons: first, because of the large proportion that outlay for food constitutes of average family budgets; and second, because of the unrest that has existed among farmers for so long, as already pointed out. But the subject of marketing farm products is only one phase of the general subject of market distribution, an extremely important part of our economic system concerning which there is as yet practically no classified knowledge available. As a general proposition, manufactured products are marketed through the hands of fewer successive middlemen, but on wider differentials between factory and consumer, than are the staple farm products between farmer and consumer. It is said that the factory cost of a sewing machine is less than ten dollars as compared with a retail price of forty dollars; that a hundred-dollar typewriter costs less than twenty dollars in the factory; that the cloth cost of a twenty-five dollar ready-made suit is less than five dollars, and that the retailer pays only from twelve to fifteen dollars for such a suit.

Whether or not these figures are correct, the differences between manufacturing costs and final retail prices for most manufactured goods are surprisingly great, and the focus of public interest will undoubtedly shift in the direction of this phase of the marketing

problem before long. Indeed many of our universities are already beginning to realize the importance of subjecting the whole field of market distribution to dispassionate scientific research, both for the purpose of teaching college students the fundamentals of merchandising and for the purpose of gaining information that is necessary for an intelligent consideration of some of our most vital questions of governmental regulation of industry and commerce. For example, many of the most important phases of the trust problem have to do with what has come to be called "unfair competition," including such practices as price discrimination, price maintenance, restrictive sales agreements, factors' agreements, etc. These are very largely marketing problems, and their fairness or legitimacy can hardly be determined intelligently without a more adequate knowledge of the fundamental features of market distribution than now exists. The hearings and debates preceding the anti-trust legislation of 1914, and the very wording of the acts themselves (The Clayton Anti-trust and the Trade Commission laws) are conclusive proof of the uncertainty and lack of knowledge with regard to these practices. If the view expressed here is correct, the newly established Trade Commission faces a difficult task. To decide on the fairness or unfairness of any specific trade practice mentioned above with the meager stock of knowledge available at present would be analogous to attempting to decide on the reasonableness or unreasonableness of a single railroad rate without knowing anything of the fundamental considerations which govern rate making in general. In other words, a study

of market distribution furnishes an important and necessary avenue of approach toward the solution of some of the most difficult phases of the trust problem.

The Development of Markets. — The marketing of agricultural products becomes more and more difficult and intricate as civilization develops, as population increases, and as people tend to congregate in large cities. If the cultivators of the soil raised and made all the products that they needed, and only as much as they needed, there would be no marketing problem. In other words, if each farmer were self-sufficient, he would not have to depend on the outside world either as a source of supplies for use on the farm or as a market for his surplus products. These conditions existed in primitive economy, and in certain parts of the world, even in backward communities in the United States, a near approach to self-sufficiency may still be found.

To the extent that people live in small villages scattered throughout the agricultural regions of the world, the marketing problem is still comparatively simple, at least so far as products raised in the vicinity are concerned. To supply such people, farmers either sell direct, without the intervention of a single middleman, or more commonly through the country store, which may well be considered the first important middleman to have appeared in marketing farm products. Marketing implies both selling and buying, and although the country store developed primarily to furnish supplies for farmers to buy, yet they served — and do serve to-day to a certain extent — as an agency through which are marketed the products that farmers sell. A complete

historical survey of the development of markets would necessarily include a consideration of fairs and " market days," but since these have played a relatively minor part in the development of marketing in the United States, their description adds little to an understanding of the present system.

The principal factors which mark the present organization and intricacy of the marketing organization, as compared with the more primitive conditions outlined above, are the concentration of a considerable proportion of the population in large cities, and the development of specialization in agriculture whereby the farmers of each region raise certain crops in excess of their own requirements and of the requirements of the local village communities. In other words, the farming sections have *surpluses of farm products which must be collected at* country shipping points, transported to large centers of consumption, and there redistributed to consumers. Population is concentrated to such an extent in the large cities that the surrounding territory can furnish only a small proportion of the necessary food supply; perishable products have to be transported over great distances, and they ripen first in one section of the country and then in another as the season advances, thus complicating the problem. All this makes necessary a highly developed and complex organization without which it would be impossible to market at all certain commodities that now pass through the channels of trade. The development of the modern transportation system is of course another factor, without which the present marketing system would be impossible. Oftentimes territorial

specialization in agriculture is carried to such an extent that the quantity of a commodity raised in any one country is greater than the consumptive requirements of that country, so that there is a surplus to be exported to foreign markets.

With these considerations in mind, the marketing nroblem indeed appears to be one of great complexity .nd difficulty. The surpluses collected at country shipping points are in turn the relatively small surpluses of nillions of individual farmers, which, taken together, orm a mass of commodities very heterogeneous as to uality, variety, degree of ripeness, method of packing, tc. Furthermore, the great bulk of farm products is arvested and marketed during a small portion of the ear, whereas city consumers desire to spread their onsumption over as large a portion of the year as possible. City consumers buy these commodities in exceedngly small quantities and demand that they be made vailable at a moment's notice in close proximity to their esidences. Add to this the fact that many commodities are highly perishable and must be handled with great rapidity and by means of special and expensive facilities, and we get a still better view of the complexity of the problem.

Specialization in Marketing. — In the evolution of the marketing system there have developed two kinds of specialization. The first is the division into separate trades, whereby each class of dealers handles a single commodity or group of commodities; and the second is the splitting up of the marketing process into a number of successive steps, or specialization by functions. The

former kind of specialization apparently meets with general approval and no fault is found with it. The latter, however, is not generally understood, and the popular opinion is that subdivision of the marketing process into a number of successive steps has been carried too far, — in other words, that there are too many middlemen between producer and consumer.

Specialization by Commodities. — Specialization into separate trades according to commodities handled begins at country shipping points. Many farm products are still handled through country stores, but as a usual rule, whenever a commodity is raised in sufficient quantity to warrant it, there appears a middleman who makes a specialty of handling it, — and oftentimes a number of such specialists at a single shipping point. Thus in the grain trade there are grain elevators, — sometimes four or five in a single village; in the butter trade, there are local creameries; in the live-stock trade, cattle buyers or shipping associations; in the potato trade, potato warehouses. In the poultry and egg trade there are dealers, who are often called "cash buyers." The extent to which the marketing at any single point is specialized in this manner of course depends on the number of different products raised and the quantity of each. Where a one-crop system is in vogue, there may be only one class of local buyers.

Specialization of this character is also found in the wholesale trades. A highly specialized class of dealers exists in the grain trade, and there are even subdivisions of this class, according to the specific grains handled. In all the large live-stock markets there is a separate

class of live-stock dealers. Specialists also appear in the cotton and wool trades, and in the handling of dairy and poultry products. In general, the degree of specialization in these lines depends largely on the size of the city. In the smaller or medium-sized cities, a wholesale produce dealer often handles a great variety of products, although in cities of medium size there appears a differentiation into groups, such as one handling butter, eggs, and poultry, one handling fruits, and one handling vegetables, although the two last named are commonly combined.

In the largest cities, these groups become even more differentiated, according to commodities handled. Butter and eggs are commonly handled by the same dealers, but poultry is frequently handled by a separate class of merchants. In New York the poultry trade is even divided between live poultry and dressed poultry. In the vegetable trade, there is also considerable subdivision. Potatoes are very commonly handled by a separate class of traders, even in the smaller cities, and there may be found dealers who specialize in certain vegetables, such as onions or cabbages, although they commonly handle a few other commodities in addition.

Specialization has also developed in the retail trade, but not to the same extent as in the wholesale trade. The grocery store usually handles a great variety of farm products. Meats are sold by butcher shops, but these are often found in connection with grocery stores. Fruits, although sold by grocery stores, are handled in great quantities by the corner fruit stands. There has been a tendency for butter and eggs to be sold by a

separate class of dealers, who also commonly sell tea and coffee in addition. A special class of dealers also handles hay and feed, and tobacco is also sold by a separate class of shop keepers. Complications in such an analysis as this arise as soon as we begin to consider agricultural products that are radically changed in form by manufacturing, and in our study of marketing farm products it is best to carry the products only so far as they retain at least approximately their natural state.

Specialization by Functions. — Ordinarily the marketing process may be divided roughly into four successive steps, viz., country shippers, transportation companies, wholesale dealers, and retail stores. In passing through the wholesale trade, there may be two or three successive middlemen, such as a commission man and a jobber, or a broker and a jobber, or a broker, an auction company, and a jobber. The cold-storage warehouse may enter as an additional middleman, or a drayman may enter between railroad company and commission man, or between wholesaler and cold-storage plant. The functions of these various middlemen will be described in subsequent chapters; we are concerned in this place with the mere fact of subdivision.

It will be remembered that marketing is a part of production. Specialization into successive steps is a form of division of labor, and division of labor is commonly praised as a phenomenon that reduces the cost of production or that makes possible the production of a greater amount of wealth with the same amount of effort. We praise division of labor in the packing plant whereby each workman performs a single task and

becomes an expert at that task. We also praise that form of specialization whereby the manufacturing process is subdivided among separate plants. In the steel industry, for example, one plant makes nothing but pig iron; another makes the pig iron into crude steel; another rolls the steel into bars; another takes the bars and makes structural forms, or machinery. In the worsted industry, the tendency is towards a greater subdivision of tasks among separate plants. The combing of wool into "tops" is usually performed by the same mills that spin yarn, but there is a tendency for tops to be made in a separate set of mills, as in England, where the worsted industry has reached a high degree of development, and where combing is usually performed in a separate set of combing mills. In both the steel and worsted industries the plants performing successive steps are sometimes separately owned, or they may be under a single ownership, in which case we have "integration" of industry; in either case there is specialization.

It is difficult to understand why this division of labor or specialization argument should not apply to the marketing part of production as well as to the manufacturing part of production. Those who have really made a first-hand intensive study of the wholesale produce trade realize that there are certain necessary functions to be performed, and that these functions are much more difficult and complex than is commonly supposed. Each successive middleman specializes on one particular set of functions. For example, in New York City a large part of the butter reaching that city passes through the hands of two different middlemen before reaching the

retail stores. The first is a wholesale receiver, who receives butter in large quantities and in great variety from a large number of country creameries. He sends out solicitors to get in touch with the creameries, and he often finances them by allowing them to draw drafts on day of shipment. He provides a store or warehouse with adequate refrigeration, assembles the miscellaneous shipments from different parts of the country, weighs them and makes returns to shippers and sorts them out roughly according to quality. In this particular trade the wholesale receiver does not have delivery equipment, but has an independent drayman (really another middleman) haul the goods from the freight sheds to his warehouse.

These functions of the receiver form a business in themselves. He sells in lots of from twenty to fifty or more tubs to jobbers, who in turn send salesmen to the thousands of retail stores, delicatessens, restaurants, hotels, etc., and deliver one tub at a time from day to day, as the needs of the retail outlets demand. It is common for a jobber to specialize on some particular class of retailers who require certain qualities and amounts of butter, and he makes his purchases from the receivers according to the class of trade he serves. Furthermore, he finances the retailer by giving him credit, and maintains an accounting department to care for innumerable small accounts. In other words, the jobber specializes in steering the carloads of butter that arrive every day into innumerable small channels according to quality and quantity desired.

The extent to which this subdivision of processes is

carried out varies in different trades according to the characteristics of the commodity handled, and according to the size of the city which is being supplied. In the butter trade, the organization outlined above does not exist to any great extent outside of New York, Chicago, and Philadelphia. In other cities, the wholesale receivers commonly sell direct to the retail trade. In fact there has been a tendency in recent years in New York City for these two branches of the trade to consolidate, although there will probably always be a need for a separate class of jobbers. In the fruit trade it is the usual rule for goods to pass through the hands of at least two classes of middlemen, analogous to those described above, and oftentimes a broker or an auction company comes in as a third step, even in the smaller cities.

It is sometimes thought that these various middlemen arbitrarily divide the trade among themselves, each clinging to one definite set of functions, and leaving other functions to other middlemen. It is true that in some trades these divisions are very clear cut and that the various dealers sometimes definitely protect each other by refusing to overlap into each other's field of activity. But as a rule an adjustment or readjustment of this division of functions is going on all the time, and traders are continually experimenting, unconsciously perhaps, in extending or restricting their functions, irrespective of the desires of other traders on whose territory they may be encroaching. Sometimes an extension of functions on the part of a wholesale receiver, for instance, into the jobbing field, results in a lower cost of marketing and hence a permanent readjustment of the trade. Such

an adjustment usually comes about gradually without causing much friction.

When one dealer undertakes to combine and to perform functions formerly performed by two or more successive middlemen, we have what might be called integration of marketing processes, similar to what is called integration of industry. The United States Steel Corporation offers perhaps the best illustration of integration through the ownership of mines, steamers, railroads, blast furnaces, open-hearth furnaces, etc. But, as mentioned before, such integration does not mean any smaller degree of specialization. The chain-store company is an illustration of such integration in merchandising, because it takes over the functions of the jobber and the retailer with resulting economies, but specialization by functions still exists because the business is divided into departments, each department having a definite set of duties. The economies resulting from chain stores are considered in Chapter XX.

But the tendency in many trades has been for dealers to restrict their operations by specializing on a narrower and narrower set of functions, thus bringing about a greater subdivision of processes and a larger number of successive middlemen. Such a reorganization is impossible, however, unless economies result. Instances of the introduction of new middlemen who facilitate distribution and lower the total cost of marketing are common; the auction company (described in Chapter VII) is a good illustration; the entrance of the broker in some trades furnishes another example; the specialist who does nothing but cut bulk butter into prints has brought

about certain economies in the butter trade; a coöperative or centralized delivery system which would do away with the vast duplication of delivery equipment and the covering and re-covering of the same territory, is an illustration of this principle which may develop in the future.

Are There Too Many Middlemen? — When the statement is made that there are too many middlemen, it may mean one of two things: either that the process of subdivision already described has gone too far so that there are too many successive steps, or that there are too many of each class, such as too many country buyers, too many wholesalers, or too many retailers.

The discussion in the preceding paragraphs bears directly on the question as to whether there are too many successive steps, and this is what most people mean when they glibly state that there are too many middlemen. It was pointed out that such subdivision is merely an example of the well-known doctrine of division of labor, and that economies may result from specialization by functions. Although it is perhaps impossible to say definitely whether there are too many middlemen in this sense, it is at least true that there is ample economic justification for a subdivision of the marketing process among specialized classes of dealers; that in some cases lower cost and greater efficiency may be gained by further specialization; and that in other cases it may be possible to reduce the cost by combining the functions of two or more middlemen into the hands of one single middleman. The functions of marketing have to be performed, however many separate middlemen there are; the problem is to find the most economical combination of functions.

This is a matter that can be determined only by careful investigation in each separate trade. Those who have really made first-hand studies of the marketing system in an impartial and unprejudiced way realize that on the whole the system of marketing that has developed is efficient, rather than "extremely cumbersome and wasteful," and that there are very good practical reasons for the form of organization that has developed. It is necessary to realize these fundamental facts before the reader can approach a study of the marketing problem with a sane point of view. That is why such an important conclusion is stated in the first chapter of this book. It may be claimed that this conclusion has been reached largely by *a priori* reasoning, but the reader will perhaps agree that facts brought out in subsequent chapters substantiate the validity of this point of view.

Whether there are too many middlemen of each class is also a more difficult question to answer than is commonly believed. While the subdivision of processes into successive steps is a problem in division of labor or specialization, the question as to whether there are too many country buyers, too many wholesalers, or too many retailers, is principally a problem in large-scale production, or proper size of business units. As for local shipping units, such as creameries, elevators, etc., there are many places where shipping facilities are inadequate; at other places there are often more buyers than necessary, as frequently occurs in the live-stock business, or in the cotton trade, or in the grain business. The larger the shipping unit, the lower the cost of handling, as will be shown in the case of grain elevators in Minnesota in

Chapter II, but this applies principally to forms of marketing which require considerable investment of capital in warehouse or other facilities.

In the wholesale trade we already have fairly large business units, and it is questionable whether much would be gained by a further concentration. The principal question in this connection is in the retail trade, and most writers and speakers on the subject feel perfectly safe in stating that there are too many retail stores. This also is a complicated question, however, and its consideration will be deferred to the chapter devoted to the retail trade.

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CHAPTER II

MARKETING AT COUNTRY POINTS

In studying the organization of marketing and the functions performed by the various middlemen, it is convenient, as well as logical, to begin with marketing by the producer at country points. In general there are five ways in which a farmer may market his products, as follows:

1. By direct sale to consumers —
   (a) By going direct to residences.
   (b) Through public or municipal markets.
   (c) By parcel post or express.
   (d) To local manufacturers.
2. By selling to local stores.
3. By shipping direct to dealers in large cities.
4. By selling to a local buyer.
5. By shipping through a coöperative association.

Direct Sale to Consumers. — In the small towns it is common for farmers to sell direct to consumers by delivering goods at their residences. Farm-made butter is very commonly sold in this way, and the farmers' wives who make good clean butter often build up a permanent and remunerative trade. Farmers also frequently reach consumers by "huckstering." In other words, they haul their goods by the wagon load and go about from house

to house until they have sold out their goods. This is not done to any great extent, except in smaller towns and cities where there is not enough business to justify the establishment of a regular market place. In larger cities, farmers often sell directly to consumers through public or municipal markets, although they more commonly sell to retail stores and wholesale dealers in such market places. This subject, as well as marketing by parcel post or express, are so important that they will be treated in separate chapters. Suffice it to say in this place that from the standpoint of the farming population, the public market is of interest only to those who live in close proximity to large cities. Shipment by parcel post can be developed for only a few commodities, and not to any great extent even for these. Consequently direct sale either through public markets or by parcel post is not of great importance from the standpoint of the total quantity of farm products marketed. In some parts of the country local manufacturing plants, such as canning or beet-sugar factories, furnish an important market for farmers. They usually enter into contracts with growers covering the product of a specified number of acres, thus insuring a supply of raw materials for the factory and a definite market for the farmers.

Selling through Local Stores. — The next step above direct marketing to consumers in small towns and villages is sale to the local stores. Before specialization in marketing at country points developed, the local stores played a much more important part in marketing at shipping points than they do to-day, because as country buyers of various kinds have appeared, there have been

left fewer and fewer commodities to be marketed through the stores. And yet there are many commodities that are marketed in large quantities in this way, notably eggs and dairy butter, and in the South, cotton. Vegetables, especially potatoes, are also frequently marketed through stores, and sometimes smoked meats, poultry, and other products. A certain amount of live stock is also sold to local butchers. On the whole, the marketing of farm products through the country store is a crude and unsatisfactory method. As long as the store takes only enough produce to satisfy its local trade, it forms a very convenient and satisfactory middleman between the farmers and village merchants, but as soon as it has a surplus to ship out to city markets, disadvantages appear. Perhaps the principal difficulty is that country stores rarely discriminate between goods of different qualities. This has the effect of making the farmers careless about the goods they market, because no premium is placed on superior quality. The reason why the storekeeper fails to discriminate is that he is afraid of offending and losing his customers. Another weakness of this method is the fact that stores commonly pay farmers in trade rather than in cash. Many of them are afraid that if they pay cash, the farmers will send it away to catalog houses. When the farmer receives trade for his products, he is too apt to determine the extent of his purchases by the amount of trade due him from the store, rather than by his actual needs.

The country storekeeper is also apt to be careless about the handling and storing of products which he ships away to other markets. This is especially true in the handling

of dairy butter. Even in communities where there are local creameries, the farmers often make butter on the farm in sufficient quantity so as to have some to trade at the village stores. They feel that they are getting something for nothing. This butter is of various degrees of sweetness and cleanliness, but the country storekeeper does not dare to discriminate, because each farmer's wife thinks that she makes the best butter that can be made. The storekeeper sells the best of this butter to his village customers, and throws the rest into an old barrel or other container until he has accumulated enough to ship. Sometimes such butter is kept in clean containers under ice, and shipped out fairly frequently, but it is very often allowed to accumulate for weeks at a time in the back of the store or in the basement. It is then sent as " packing stock " to a " renovator " in some large city, who melts this heterogeneous mass of butter, blows air through it to remove part of the evil smell, and reworks it into " renovated " or " process " butter, which is sold to cheap restaurants and to the poorer classes. Although not particularly palatable to a person with refined tastes, this product is wholesome, and the renovating process conserves, or at least greatly improves, a product which would otherwise be practically worthless. The quantity of renovated butter manufactured in the United States appears to be decreasing, as the butter industry is shifting from the farm to the creamery. In 1906–07 nearly sixty-three million pounds were manufactured; in 1909–10, forty-seven million pounds; and in 1913–14, only thirty-two million pounds.[1]

[1] Annual Report of the U. S. Commissioner of Internal Revenue, 1914, p. 139.

Eggs are also marketed very largely through country stores, and there is practically the same difficulty as with butter. Merchants accept the eggs, even though they may know that many are unfit for use, and pay the market price in order to retain the good will and trade of the farmers. As a result there is very little incentive to farmers in many localities to gather their eggs frequently, to standardize and improve their breeds of poultry, to keep the nests clean, or to take proper care of the eggs while holding them on the farm and while carrying them to town. This system also results in sending vast quantities of poorly graded eggs to the large wholesale markets, thus necessitating careful candling and sorting, and having an injurious effect on the general average quality of all eggs marketed. The method of selling through the country store is largely responsible for this unsatisfactory condition.

The storekeeper also plays an important part in the marketing of cotton. Under the system of tenancy in parts of the South whereby negro farmers rent small tracts from large land owners, an unsatisfactory system of agricultural credit developed through the agency of local merchants. These merchants advance supplies to the farmers, and in return take mortgages on their crops. Under this system the storekeeper dictates to the farmer the amount and character of the crop which he is to grow, and compels him to buy his supplies from and sell his product to him. This condition does not prevail in all parts of the South. In northern Oklahoma, for example, where cotton is not the only crop, the farmer is more independent and trades his cotton with the local

merchant in much the same manner as the farmer of the Middle West trades eggs. There is often keen rivalry among storekeepers to get the trade of the farmers, and they not only pay in trade all that the cotton is worth, but sometimes deliberately pay more.[1] Much of the cotton crop is also marketed to local buyers at country shipping points.

Shipping Direct to City Dealers. — Before the marketing organization became so well developed it was more common for individual farmers to ship their products direct to city dealers, either wholesale or retail stores, but with the development of the country stores and local buyers, farmers ship more and more through these agencies. In fact it is rather uncommon for farmers to ship direct, except in the case of some commodities. *Live stock, for example, is often shipped by individual* farmers to the commission men in the live-stock markets. The great obstacle to individual shipments is that the average farmer does not have enough products at one time to get carload rates. The individual shippers of live stock are those who raise enough to be able to fill a car in a single shipment. Sometimes two or three farmers will go together in filling a car, and this kind of coöperation has been carried farther in the form of live-stock shipping associations, whereby the small contributions of a number of individual farmers are combined into carloads. In sections of the country where farmers specialize in stock raising, as in Iowa, there is little need

[1] Sherman, Taylor, and Brand, Studies of Primary Cotton Market Conditions in Oklahoma, Bulletin of the U. S. Department of Agriculture, No. 36, p. 23.

of the shipping association, because there are so many farmers who are in a position to ship direct.

Sometimes farmers ship grain direct to commission men in the primary markets, but this is not, and never has been, the usual custom in the principal grain states, because local elevators were built along the lines of the principal railroads in the early days. The possibility of direct shipment has an influence in holding up the prices paid by local elevators. Another form of direct shipment is the sending of cream to the so-called "centralizers." Individual shipments are often sent hundreds of miles to these large butter manufacturers. Cream is shipped in cans by express rather than by freight. Another commodity commonly shipped by express is live poultry, which is placed in coops. Various vegetables are also commonly loaded direct into cars by farmers and shipped to city markets, on their own account. There is very little direct trade between individual shippers and retail stores in distant cities. The shipments of individual farmers are too uncertain as to quality, quantity, and regularity to make this satisfactory to retail stores. Another difficulty in the way of direct shipment by farmers is that it often takes too long to get returns from city dealers.

Local Buyers or Shippers. — The great bulk of shipments from the producing sections is handled through local buyers or country shippers. The principal functions of the local shipper are as follows: first, to consolidate the small contributions of individual farmers into car lots and thereby obtain better rates; second, to furnish warehouse facilities where products may be

stored until car-lot shipments can be made up or until market conditions are satisfactory for shipping; third, to furnish farmers with a cash market, so that they will not have to wait for returns; fourth, to sort and grade goods, and often to prepare them for market, as in the case of poultry; and fifth, to study market conditions and prices and to establish connections with reliable dealers in the most accessible markets. It is generally recognized that these functions justify the existence of this first subdivision of the marketing process.

It has been pointed out in the first chapter that specialization according to commodities handled has developed at country shipping points. There are local elevators that handle grain, creameries and cheese factories that manufacture and market their respective commodities, cattle buyers and shipping associations that market live stock, potato warehouses that market potatoes, cash buyers that market eggs and poultry and cotton, etc. A specialist dealer appears at almost every local market where goods are raised in sufficient quantities to justify his existence. Although the country store handles a variety of products in some sections, its functions as a marketing agency are gradually taken over by specialized dealers as agriculture develops. In some trades the "general consignee" described in Chapter VI consolidates the shipments of individual shippers into car lots and largely takes the place of the local shipper.

Marketing Grain through Local Elevators. — In the marketing of grain at country points, the first step is through the local elevator. Sometimes farmers store grain in these elevators on their own account, but

ordinarily they sell outright to the elevator company when they haul their grain in from the farm. In the principal grain-growing sections of the country there are often several elevators at a single shipping point, and at least in some sections there are many more than are really needed. In Minnesota, for example, the tendency has been more and more toward diversified farming and wheat has been partly supplemented by other grains which are kept on the farm and fed to live stock instead of marketed in the form of grain. As a result, the state has more country elevators than it needs, and a great many have fallen into disuse or have been torn down. The lumber from some of those that have been demolished has been hauled to newer states like Montana and reërected as grain elevators.

Local elevators are of three kinds, viz., line elevators, independent houses, and farmers' elevators. The line elevators are chains of elevators owned by large companies which have headquarters in the primary markets, and which often own a large number of houses along certain railroads. The independent elevators are owned by private individuals who live in country towns. Farmers' elevators are owned by the farmers themselves, and although many of them do not have all of the features which coöperative companies are supposed to possess, they are in the main entitled to be called coöperative elevators. Farmers' elevators have been gaining rapidly on line and independent elevators in the Northwest. In Minnesota the number of line elevators has been steadily decreasing, the number of independent elevators about holding its own, and the number of farmers' elevators

increasing. Farmers' elevators now market about one third of all grain that is marketed in Minnesota.

The cost of marketing through local elevators varies with the amount of business handled. The following statement indicates the cost per bushel of handling grain through farmers' elevators in Minnesota according to the quantity of grain handled:

Number of Bushels Handled	Cost of Handling per Bushel (Cents)
50,000 to 100,000	2.5
100,000 to 150,000	1.9
150,000 to 200,000	1.5
200,000 to 300,000	1.3
300,000 to 400,000	1.15

The Marketing of Butter. — The farmer who produces milk or cream for manufacture into butter may dispose of his product in three ways: first, he may make it into butter on the farm and sell the butter direct to individuals or to country stores, as already explained; second, he may sell to a "centralizer" either by shipping direct by express, or through a local cream buyer, or "cream station" (centralizers derive their name from the fact that they concentrate the cream from a wide territory to a central point, where it is made into butter in large factories); and third, he may haul it in the form of milk or cream to a local creamery, which may be either privately or coöperatively owned. Local cream buyers who ship to centralizers cannot afford to pay as much for the cream as the farmer would get if he shipped it himself, for the simple reason that the local buyer must take out something for his services. This is an expensive method of marketing and most of the centralizers are

doing away with cream stations and encouraging direct shipment.

In some states a feeling of bitterness has developed between farmers in coöperative creameries and the centralizers, because they come into keen competition with each other. The ideal system of butter making is undoubtedly through the local creamery, which draws its raw material at frequent intervals from within hauling distance of the creamery, because under such conditions the best possible butter can be made. The centralizers often draw their raw material from points as far away as four or five hundred miles, and since farmers frequently ship their cream but once or twice a week, practically all of the cream that reaches the centralizers is sour. It frequently happens that when cream cans are being unloaded from the express cars, the tops blow off with a loud report, due to the gases that have formed inside the can. Although the centralizers cannot make such good butter from this kind of raw material, yet their product is of surprisingly high quality, and such cities as Chicago, Minneapolis, and St. Paul consume very little that is not centralized butter. The people of the Twin Cities will not pay a high enough price to get the excellent butter made in Minnesota coöperative creameries, which is marketed very largely in New York and Philadelphia.

The centralizers are able to compete, however, with the local creameries to a certain extent even in their own communities. Farmers often ship to them or sell to cream buyers in villages where there are coöperative creameries. The supporters of the coöperative creameries complain that the competition of centralizers either

makes them lose patrons or else lower the quality of their butter. Farmers living at some distance from the creamery find that they can haul to town less frequently and get almost as much by shipping their sour cream to centralizers as they can for their sweet cream, which they have to haul to their local creamery more frequently. As a matter of fact, there are ample opportunities for both kinds of creameries. Centralizers cannot really compete successfully with local creameries that make a superior quality of butter, and they offer an invaluable market to those localities where dairying has not developed sufficiently to make it possible to maintain a creamery. Many local creameries start in business without having a sufficiently large cow population to operate a creamery economically, and under such conditions, the centralizer can sometimes pay better prices than the farmers can get through their own creamery. The marketing of butter at country points raises the whole question of cream grading, which is receiving a great deal of attention by the creamery interests. Some system of paying for cream according to grade appears to be absolutely essential in order to improve the quality of the cream handled at creameries.

Cotton Buyers. — Although much cotton is marketed through local merchants, the tendency is to market more and more through local buyers. Investigators of the United States Department of Agriculture studied the situation in one town in Oklahoma where there were twenty-seven street buyers.[1] It was supposed that where

[1] Sherman, Taylor, and Brand, Studies of Primary Cotton Market Conditions in Oklahoma, Bulletin of the U. S. Department of Agriculture, No. 36.

there were so many buyers, there would be such active competition that prices would be the highest possible, but it was found that the prices at other points where there were only two buyers were practically as high as at the place where there were the greater number. Furthermore, it was found that at the point where twenty-seven buyers were located, the prices paid on the same day for bales of cotton of the same grade showed a remarkable variation. In fact there were numerous instances where higher prices were paid for cotton of low grade than for cotton of better grade. At some places it was found that there was as wide a variation as $12.50 per bale for cotton of the same grade on the same date. It was also found that the premiums paid for better grades than middling were less than the market differences between grades in primary cotton markets, and that discounts on cotton below middling were greater than the market differences between grades in primary markets. In other words, the prices paid at country points do not correspond as closely as they should to actual market values of the different grades. This is due largely to a lack of knowledge of market conditions on the part of farmers and to ignorance about the commercial grades.

Other Country Buyers. — The instances described above give an idea of some of the problems connected with marketing important staple commodities at country points. There are various other classes of country buyers who specialize in the handling of single commodities. Live stock may be marketed either by direct shipment, as previously described, or through a local cattle buyer, or through a shipping association. Local

cattle buyers usually go about from farm to farm, offering cash for the farmers' cattle and hogs. Sometimes there are half a dozen such buyers in a single community. In sections where farmers do not specialize on live stock these buyers are apt to get the better of the farmers in bargaining, especially through the device of offering a round sum for three or four head together. A great deal of stock is sold by farmers in this way without knowing either the market price or the actual weight of their animals. Although the cattle buyer performs an important function in furnishing a market, the coöperative shipping association is partially taking his place in some states as explained above. The net price received for stock by farmers is ordinarily increased appreciably through such an association.

In marketing potatoes at country points, the farmer may ship direct, or sell to a local potato warehouse, or sell through his own shipping association. The privately owned warehouse, oftentimes owned in groups or chains similar to grain elevators, is probably the most important means of marketing, although coöperative shipping has been developing in some of the Eastern states. In the poultry and egg trade, there are local middlemen, called "cash buyers," who buy either from farmers direct or from the local stores. Local poultry buyers often kill, dress, and pack poultry before shipment to market. Fruit is sold largely to track buyers, and also to an increasing extent through shipping associations.

Weaknesses of Marketing at Country Points. — The foregoing descriptions indicate the importance of local buyers in the general marketing scheme; on the whole

they are the means of supplying the farmers with a steady cash market. There are, however, certain weaknesses in the present system. At some points there are no buyers for certain commodities; at many places there are too many buyers, as in the grain and cattle trades in Minnesota. When there is only one buyer, he is apt to use his monopoly power to depress prices; when there are several buyers, they are apt to agree among themselves on the prices that they will pay. When there are too many buyers, each gets such a small volume of business that his expense per unit of goods handled is necessarily high, and consequently he has to take out wider margins and hence pay farmers lower prices than if the business were concentrated into fewer hands.

Other weaknesses of marketing at country points may be attributed to country stores, as already described, and still others to the farmers themselves. In the first place, farmers are generally pretty ignorant about market conditions. This is no very serious charge, because farmers in general cannot possibly hope to follow market prices and conditions in detail, and they necessarily have to rely on the honesty of local buyers, who, however, are only too apt to take advantage of the farmers' ignorance. More serious than this is the ignorance of the average farmer with regard to proper grading and packing, and his indifference to cleanliness and quality. Investigations in Minnesota reveal the fact that farmers frequently keep their cream separators in their stables, and that oftentimes they fail to wash them out after each using. The lack of attention given to egg production and gathering is appalling. The mixing of different sizes and varieties

of potatoes and other products in the same load, and the inclusion of "culls" and "rots" and other defective commodities indicate not only a lack of appreciation of the importance of grading, but sometimes even a lack of honesty. Improper grading and preparation for market are undoubtedly the most serious weaknesses of marketing at country points, but the whole problem of standardized grades is so important that it is reserved for a separate chapter. The matter is referred to at this time, however, as indicating one of the greatest reasons why associative or coöperative shipping is desirable.

Marketing through Coöperative Associations. — Although in a few instances farmers' coöperative organizations have undertaken the marketing of their goods in terminal markets, the great majority of them handle goods only at country shipping points — and this is where they fulfill the greatest need. Such organizations are desirable either where marketing facilities are lacking altogether, or where the existing facilities are defective. Ordinarily a farmers' shipping association does not eliminate any middlemen; if local marketing agencies are already in existence, it merely takes the place of such middlemen; if there are no marketing agencies, the formation of a shipping association amounts to the addition of another middleman. As pointed out in Chapter I, however, the addition of another middleman may result in greater efficiency and in lower cost of marketing — and this is generally the case with farmers' associations, especially if they are organized not merely for the sake of coöperating, but to perform some definite service, and if they perform this service under efficient

management. If the management is truly efficient, such organizations save to the farmers at least the profits of local middlemen — and this saving may or may not be considerable, depending on the efficiency and honesty of the marketing machinery that they displace.

The amount of saving also depends somewhat on the number of competing local middlemen that the organization displaces. It has already been pointed out that when there are a number of local buyers each gets such a small volume of business that his expenses per unit of product are high, and that he therefore has to take out wide margins. By concentrating the business into a single organization, the overhead expenses may be materially reduced, if the management is efficient, so that the farmers obtain a higher net price for their products. But perhaps the greatest opportunity for saving is through improvement of quality, more careful grading, and better packing. If the farmers are well organized, they can agree on the varieties of commodities to be raised; they can have their packing done in common; they can supervise the quality of goods brought to the association, and by establishing their own brands build up a reputation for their products and hence command higher prices. These results have been attained by many shipping associations in the United States, and there is an almost limitless field for development in the future. Further discussion of the coöperative movement in the United States is reserved for Chapter XIX.

In this chapter there has been given a brief review of the principal methods of marketing at country points,

and although there are many ways in which this may be accomplished, the usual and most economical method is through the local buying or shipping unit. After leaving country points, commodities are hauled by railroad to cities where they pass through the hands of wholesale dealers and finally to retail stores. Although there are various problems connected with the transportation service which might logically be treated before the wholesale trade is considered, these matters are reserved for a later chapter. Before describing the organization and functions of the wholesale trade, however, it is necessary to know something of the methods of selling, which will be discussed in the following chapter.

CHAPTER III

METHODS OF SALE

ONE of the perplexing problems that confront the farmer or the country shipper is to determine the best way in which he shall sell to the dealer in the distant city. In general, before a person sells an article, he wants to know the price he is to receive for it. In fact he demands to know it if he can find some one who will buy; but if there is no one near, or no one in a distant city who will take his word for the quality of the goods he wants to sell, it may be necessary to simply send them along — perhaps to a point hundreds of miles away — trusting that the condition of his commodities on arrival, and the honesty of the dealer who handles his goods, will both be favorable, and that the price will be sufficient to repay him for his trouble. But before considering the various methods of making a sale, it is well to understand something about the bases on which sales are made.

The Basis of the Sale. — There are three bases on which a sale may be made: first, on the goods themselves in their entirety, sometimes referred to as sale in bulk, or sale by inspection; second, on a sample of the goods, whereby a small portion of the goods is displayed for inspection of the buyer; and third, on a mere description of the article to be sold, whereby the seller simply names

the grade, or describes by picture or by an oral or written description without showing either the goods or a sample thereof.[1]

At one time, practically all sales were made in bulk. Without a relatively high development of commercial ethics, the bulk sale is the only kind possible, but as business honesty advances, and as commodities become more highly standardized, there is a tendency for sales by sample and sales by description to supplant bulk sales. There are certain commodities, however, which are not adaptable to sale by sample or description, as for example, live stock. Many perishable fruits and vegetables are too risky for dealers to buy without having a chance to look the goods over. Potatoes are usually sold in bulk, because large quantities are apt to run uneven in quality, and a small sample does not serve as an accurate index of the whole quantity.

Uniformity in quality is the feature that makes sale by sample possible. In the fruit auctions, sale is by sample, and this has been made possible by a standardization of pack and package by the large shipping associations. Grain furnishes an admirable example of sale by sample. A carload of grain ordinarily runs fairly uniform in quality. To overcome any lack of uniformity, a composite sample is taken by extracting small quantities with a "probe" from various parts of the car. The samples thus obtained are placed in pans or bags on tables in the grain exchanges, and the buyers inspect the samples before making bids for the grain.

[1] See Shaw, Some Problems in Market Distribution, *Quarterly Journal of Economics*, Vol. XXVI, p. 721 *et seq.*

Sale by description is not so common with farm products as with manufactured products, and yet there are some which are sold without showing even a sample of the commodity. Grain again furnishes the best example. In Duluth, samples are not displayed, and wheat is sold by merely naming the grade. This is also the case in Winnipeg, although there is agitation for a "sample market" in that city. Certain fruits and vegetables are often sold by a shipper to a dealer in a distant city by merely wiring a description of the articles, but the extent to which buyers will trust a shipper in this way depends on the reputation of the shipper for honesty and for care in packing. In the field of manufactured goods, sale by description is becoming very common. The mail-order business, for example, is based on this method of sale.

The substitution of sales by sample and by description for sales in bulk represents an advance in marketing methods. Bulk sales involve the most time and expense. Personal inspection of large, bulky articles consumes time and requires the employment of more buyers and salesmen. Every improvement in grading and every advance in commercial honesty tends to bring about the more economical methods of sale by sample or description.

Kinds of Sales. — The simplest form of sale is where buyer and seller come together, determine the price, and consummate the sale then and there with a cash payment. This is the way the farmer ordinarily sells his products, unless he is shipping to a distant market. The cotton grower in the South sells outright for cash

to a local buyer; the grain farmer is paid cash by the local elevator company when he hauls his grain to town; the cattle buyer pays the farmer cash for his live stock. The farmer ordinarily wants cash if he can get it, whatever he is selling, and this desire sometimes stands in the way of his getting all that his products are really worth. Local buyers know market conditions better than do the farmers, and often take advantage of them. Farmers sometimes voluntarily give up the privilege of receiving cash when they market their butter fat through their own creamery, or their stock through their own shipping association. The coöperative creamery usually pays its patrons once a month, after deducting expenses from the total receipts of the previous month. Sometimes when there is a local cash cream buyer, the coöperative creamery has to pay its own members cash in order to hold its patronage. When farmers ship through a live-stock shipping association, they await returns from the live-stock market instead of taking cash from the local cattleman.

The principal problems arise in connection with shipping to distant markets. Sometimes it is the farmer himself that ships, but more frequently it is the country shipper, such as an elevator or cattle man, or cash buyer. The principal ways that sales may be made are as follows: (1) on consignment; (2) f.o.b.; (3) "on track"; (4) "delivered"; (5) "to arrive"; (6) under contract; (7) by auction.

Consignment Sales. — A shipper sells on consignment when he sends his goods to a commission merchant, who in turn finds a purchaser, and remits to the shipper the

gross returns, minus commission for selling, as well as transportation and other charges. The commission merchant does not become the actual owner of the goods, but acts as the agent of the shipper, and is presumed to procure the very best price obtainable. But the shipper parts with his goods without knowing what he will receive for them, and there is an obvious disadvantage in this. Furthermore, there is the possibility that the commission dealer may make false returns, and there is always more or less suspicion on the part of country shippers whether the commission men are honest or not. A further disadvantage to the shipper is that he runs the risk of loss in case of accident or poor handling in transit.

Among shippers, especially of highly perishable and seasonal commodities, there is a decided antipathy to the consignment method, and an attempt to make use of other methods. An investigator of this subject who sent a questionnaire to fruit shippers, did not receive a single reply that favored the consignment method, if there were any other method available. As will be pointed out in the next chapter, however, there are certain trades in which the commission men are so well organized and in which marketing methods have become so highly standardized, that sales by consignment are not only the rule, but also are satisfactory to practically all concerned. Other features of the commission business will also be considered in the following chapter.

Price Factors Considered in Making a Sale. — It is sometimes difficult to distinguish between f.o.b., track, delivered, and to-arrive sales, and in fact the terms are often used loosely, — sometimes with different meanings.

In general, there are two criterions that determine into which of these four classes any particular sale falls: first, the *place* to which the price refers; and second, the *time* to which the price refers. The price of potatoes in the central part of New York State is different from the price in New York City; in fact the up-state price is (approximately) the New York City price minus freight and handling charges to the city. If the New York City wholesaler pays the city price, then in making returns to the shipper he subtracts freight, switching, and any other charges, meaning that the country shipper pays these charges; if he makes his price applicable to the up-state shipping point, then he (the city buyer) pays the freight and other charges. This explains what is meant by the place that price refers to.

As for the time factor in setting price — the New York City dealer agrees by wire to buy a carload of potatoes at up-state shipping point, but it will take several days before this car reaches New York. If the dealer sets a definite price by wire, he is running the risk of a fall in price before the goods reach him, in which case he may have to resell them at a loss; if he merely agrees to take them at the current market price on day of arrival, in which case he is protecting himself, the shipper bears the risk of price fluctuations between time of shipment and time of arrival. Since the wholesale dealer ordinarily transacts business on very small margins, as will appear in following chapters, he cannot usually afford to run this risk of price fluctuation, although if he is sure that the market will rise, he may be willing to do so. Therefore, under normal conditions and for most com-

modities, the wholesaler cannot agree to pay a definite price several days before the goods reach market, unless there is some way that he can protect himself (as in the grain trade) or unless, indeed, the country shipper will accept a low enough price to protect the wholesaler against price fluctuations.

With these points in mind, the principal differences between the four kinds of sales alluded to above are brought out in the following condensed tabular statement which will serve as a guide in describing these kinds of sales more in detail:

STATEMENT SHOWING DISTINCTION BETWEEN DIFFERENT KINDS OF SALE

Kind of Sale	Place Price Applies to	Time Price Applies to	Who Pays Freight and Other Charges?
F.o.b. shipping point	Shipping point	Either day of sale or day of arrival at destination	Buyer
Track	Shipping point	Day of sale	Buyer
Delivered	Destination	Day of arrival at destination	Shipper
To arrive	Destination	Day of sale	Shipper

The f.o.b. Sale. — The letters f.o.b. are an abbreviation of the words "free on board" and in themselves imply nothing more than that the delivery into the car or boat is to be without expense to the buyer. Hence if a Boston merchant buys a carload of eggs from a Chicago merchant, f.o.b. Chicago, this means that the Chicago

merchant attends to loading the goods into the car, and that the expense and responsibility of the Boston merchant begin when the goods begin to move. In the export wheat business through Gulf ports an important factor of the terms of sale is whether the price is made f.o.b. vessel, or f.o.b. track at port of export, because there is considerable expense, amounting to over one cent a bushel, in getting the grain loaded into boats.[1] Although the term f.o.b. is frequently used in conjunction with the name of some locality, as "f.o.b. Chicago," it is also commonly used without designating any particular place, in which case "country shipping point" is understood. In the fruit and produce trade, therefore, an "f.o.b. sale" means "f.o.b. shipping point." This in turn means that the country shipper merely loads the goods into the car, and that the buyer pays the expenses of getting them to market; and the buyer naturally subtracts these expenses from the terminal market price to make it apply to country shipping point. If he can buy potatoes in New York City for forty cents a bushel, he may make an f.o.b. price of thirty cents for some up-state town from which the freight rate and other expenses to New York City are ten cents. As for the time element of the price, the f.o.b. sale may call either for a specified price at time sale is consummated (in which the buyer takes the risk)[2] or a price depending on market quotations on day of arrival. Many Minnesota creameries sell their butter to New York receivers in this latter way; the price is made f.o.b. shipping point, say at one cent under New York quotation on day of arrival. If the creamery were

[1] See below, p. 113. [2] Or the same as a "track" sale.

to pay the freight and cartage, then the receiver would be willing to pay about one half cent over the quotation for the same butter.

The Track Sale. — The true " track " or " on track " sale is an f.o.b. shipping point sale, except that the price is fixed at the time the sale is consummated. The buyer in the distant market therefore both pays the freight and runs the risk of price fluctuation before the goods reach market. Track sales are common in the grain trade; primary market dealers send out their " track bids " by postal card or by wire to country elevators during the afternoon of one day, stipulating that the price must be accepted before the opening of the market the following morning. If an elevator wires in an acceptance and therefore closes the transaction, the buyer can immediately protect himself by hedging in the future market (described in Chapter XVI). But most commodities cannot be protected against price fluctuations in this way, and although it is a great advantage to the shipper to know definitely the price he is to receive when he parts with his goods, the pure " on track " sale is not common. Exceptions sometimes are found in the case of goods that are of superior quality and of known brand, especially when the shipping point is not too far distant from market.

The " Delivered " Sale. — The delivered sale implies delivery by the seller to the market of the buyer; *i.e.* the shipper pays the freight and other expenses, and the buyer in making returns reports the gross price, but deducts the various charges. The price is also dependent on market prices on day of arrival at market.

From the standpoint of the shipper this is more desirable than the commission method, where he has no guarantee whatever as to price, but it is not so desirable as the track sale, where the price is definitely fixed. There is little to choose between the delivered sale and the f.o.b. shipping point sale with price depending on quotations on day of arrival, except that under the delivered sale the responsibility of loss during transit and trouble of pressing claims against the railroad rest with the shipper, whereas under the f.o.b. method, the buyer assumes this responsibility.

The "To-Arrive" Sale. — The to-arrive sale is not very common, but is used frequently in the grain trade; it is like the delivered sale in that the price is paid for the goods delivered in the market of the buyer, the shipper paying the freight, but it is like the track sale in that a definite price is fixed at time sale is made, even though the goods may not reach market for two weeks or more. In Minneapolis, to-arrive sales are made for delivery within twenty days. The risk of price fluctuation in the meantime would have to be borne by the grain buyer if it were not for the possibility of protecting himself by hedging in the futures market; in fact the same considerations apply to the to-arrive sale in this respect as to the track sale. Country elevators frequently use this method, and it is a great advantage to them to know definitely the price that they are to receive. When an elevator sells a car of No. 1 Northern wheat to-arrive, the buyer waits until the car reaches market to see if it really grades No. 1 Northern before he settles in full.

Sales by Contract. — Sale by contract means that

the seller agrees to deliver goods in the future, often at a stipulated price, but sometimes merely as an assurance that he will turn over all or a certain part of his output to a dealer or commission man who agrees to market the goods to the best advantage. The actual terms of sale may therefore involve any of the methods described above, and, in fact, the contract is used in a great variety of ways. Canning factories and beet sugar factories often enter into contracts with growers in the neighborhood to take the product grown upon a certain number of acres. Large creameries enter into short-time contracts with dealers to deliver a certain number of pounds of butter per week during the storage season. The growers of cantaloupes in California in return for money advanced to grow crops enter into contracts with large distributing firms to turn over their output to them. Under similar circumstances Florida tomato growers enter into contracts with brokers or dealers to turn over their output to them to be marketed.

One of the commonest instances of selling under contract is practiced by wheat growers, who contract to deliver their wheat to local elevators at stipulated prices sometimes before the wheat is harvested. During the spring of 1915, for example, Kansas farmers were contracting to sell their crops to local elevators for one dollar per bushel. The difficulty with this method is that when the price rises to a point above the contract price, farmers are inclined to haul only a part of their wheat to the elevator with which they have contracted, and to haul the rest to some other shipping point to be sold at the current price. On the other hand, if the

price falls below the contract price, the farmers always haul in every bushel — in fact it is intimated that they sometimes deliver grain belonging to neighbors who are not under contract. During 1914 many farmers in Kansas had contracted to deliver their wheat at sixty-five cents per bushel, not anticipating the phenomenal rise in price which occurred after the outbreak of the war in Europe, and the local elevators encountered considerable difficulty in securing the fulfillment of these contracts.[1] Although there are advantages to both seller and buyer in the contract method, it is not certain that it is best for farmers to use it in the grain business.

Sale by Auction. — Sales may be further classified into "private" and "auction" sales. The methods of sale heretofore discussed are "private sales"; the auction method is employed sometimes at country points, but more commonly in wholesale markets. In Virginia, North Carolina, and South Carolina, tobacco is sold by auction at local points. The sales are held in warehouses, to which the growers bring the tobacco they have for sale, and where the different grades are neatly piled on the warehouse floor. Sales are made in the warehouse where the buyers can inspect the entire lot of tobacco offered for sale. The warehouseman collects fees which usually run as follows: a weighing fee of 10 cents per 100 pounds; an auction fee of 25 cents a pile; and a commission of 2½ per cent. A North Carolina law fixes these fees as the maxima that may be charged.[2]

An interesting use of the auction occurs in connection

[1] Kerr and Weld, "Prices of Grain in Kansas," etc., p. 16.

[2] Holmes, "Systems of Marketing Farm Products," p. 157.

with the sale of pure-blooded stock, especially beef and dairy cattle and hogs for breeding purposes. Such a sale may be held by an individual breeder on his own farm, or it may be a " combination sale " held in connection with some exposition. In the case of a private sale, the breeder has printed an elaborate catalog containing pictures and pedigrees of the animals to be offered for sale, and sends these out to all breeders who may be interested. The terms of sale are included in the catalog, and also directions for reaching the farm of the seller. Although the buyers come mainly from the surrounding territory, the sales of well-known breeders often attract buyers from distances of five hundred miles or over. The leading breeders make a business of attending each other's sales, and the bidding often becomes very lively and exciting, and the spirit of rivalry among buyers often leads them to pay more than their best judgment dictates. A specialized class of auctioneers makes a business of conducting these sales, and since they must have an intimate knowledge of pedigrees, one group of auctioneers specializes on beef cattle, another on dairy cattle, etc. A beef cattle auctioneer (who usually enjoys the title of " colonel!") charges from twenty-five to one hundred dollars a day for his services, depending on his reputation as a successful auctioneer. The advantage of the auction system to a private breeder is that it affords him the cheapest and quickest way of bringing buyers together to dispose of his surplus stock; the method of private sale for an isolated breeder is both expensive and uncertain.

The most important use of the auction method of sale

in marketing farm products in the United States occurs in the fruit trade in the large wholesale markets, but this will be considered separately in Chapter VII. It should also be mentioned in passing that the London wool auctions illustrate perhaps the most important use of the auction method in the whole world.

Methods of Payment and the Financing of Shippers. — In connection with the methods of selling, the methods of payment when sales are consummated are of importance. The simplest method of payment is by cash at the time the sale is made. The farmer usually insists on receiving cash from the local buyer, although in certain cases when he has his own marketing association he awaits returns from primary market. When goods are shipped on consignment, the commission merchant must wait until goods have been sold before making remittance in full; or if the shipper is a regular consignor and is in no hurry for his money, settlement may be made only once a month. If goods are sold outright to a wholesale receiver, remittance may be made as soon as the goods arrive.

But in these methods there is always more or less delay; it takes several days for goods to reach market in the first place, and additional time for returns to be made out and to reach shippers by mail. In the meantime shippers are constantly receiving commodities from farmers which they would not be able to buy if their capital were tied up in commodities on their way to market or held in storage awaiting shipment. In other words some method of financing shippers is necessary if they are to continue to do business day in and day out.

The same considerations apply to farmers' coöperative organizations.

Perhaps the simplest and commonest way of financing a shipper is for the commission man or wholesale receiver to allow him to draw a draft covering a large proportion of the value of his commodities at the time of shipment. The draft is discounted by the local bank, and funds are thus furnished for carrying on business. The draft is sent along with bill of lading attached, and the commission man settles for the balance when the goods have been received and sold.

Sometimes it is necessary for shippers to raise funds locally, and this can generally be done through local banks with commodities collected for shipment as security, although a country bank is often unable to lend in sufficient amount owing to laws limiting the proportion of capital and surplus that may be loaned to one person. Farmers' organizations often borrow from individual farmers in the community. Farmers' elevator companies in Minnesota borrow funds from three sources, viz. commission men, local banks, and individual farmers. The average rate of interest charged by local farmers in 1914 was 6.3 per cent, by commission firms, 6.7 per cent, and by local banks, 7.4 per cent. In return for making advances, a commission house requires the farmers' elevator to agree to consign to it all or a large proportion of its grain; there are certain disadvantages to a shipper in being tied to a commission firm in this way, but on the other hand the advances made by commission firms in the grain business have been well-nigh indispensable to local elevators, especially before farming communities

have developed their own supplies of ready capital. The financing of shippers and other dealers, including retailers, is one of the important functions of wholesale middlemen in the marketing of practically all farm products.

CHAPTER IV

FUNCTIONS AND ORGANIZATION OF WHOLESALE PRODUCE TRADE

The wholesale trade forms the connecting link between country shippers and retail stores, or sometimes between country shippers and manufacturers (as in the case of wheat, live stock, cotton, and wool). In Chapter II, marketing at country points was considered, and the functions of local shippers were described. In Chapter III, the methods of sale were considered, thus linking up the country shipper with the wholesale dealer. We now have to consider the organization and functions of the wholesale trade, and to study the methods of the various classes of wholesale middlemen. In reality, the transportation company enters as an important middleman between country and city, but consideration of transportation problems will be deferred to another place.

Why Country Shippers Cannot Sell Direct to Retail Stores. — To understand the reason for the existence of the wholesale system in marketing farm products, it is helpful to begin by asking why the country shipper does not sell direct to the retail trade. The public little questions the need of the country shipping unit, but it finds it hard to understand why the extensive wholesale organism needs to exist between country and city retail

store, and it is also commonly thought that the wholesale middlemen are largely responsible for the wide spread between farm prices and consumers' prices.

Country shippers can and do ship commodities to a slight extent direct to retail stores, but the great bulk passes first into the wholesale trade. The principal reasons for this are as follows:

1. The shipments from a country shipper fluctuate in quantity from week to week and from season to season, whereas the retail store requires a steady supply from day to day. Some products mature first in one section and then in another as the season advances and the retail store would have to constantly change its source of supply if it bought direct from the country. Furthermore the production of practically all commodities is greater at some seasons than at others, and middlemen must intervene in order to care for the surplus and spread it out according to demand.

2. The quality of shipments from the country varies from week to week, and each shipment is ordinarily made up of goods of different sizes, qualities, varieties, and degrees of ripeness, whereas each retail store caters to a fairly definite class of trade and requires goods of uniform quality.

3. To procure transportation at low rates, the country shipper must send his goods in large units, — too large for retailers to handle. The average retailer carries a great variety of products and does not have the necessary facilities for storing large quantities of different goods at one time. Furthermore, it would be too expensive for him to try to furnish such facilities, or to tie up his

capital in large quantities of goods. The cost of retailing is high anyway, and the best way to reduce the cost is to obtain as rapid a turn-over as possible with the least amount of stock on hand.

4. Business relations between country shippers and retail stores are difficult to establish, and harder still to maintain. Personal solicitation and continuous correspondence are necessary, and complaints and misunderstandings are hard to adjust.

5. Retailers are notoriously "slow pay," whereas the country shipper must have cash in order to be able to pay farmers from day to day as they bring in their commodities. Even the wholesale dealers who are in personal touch with the retailers have no end of difficulty in forcing them to pay promptly. This credit difficulty alone is a well-nigh insurmountable obstacle to direct shipment from country to retail stores. Again and again attempts to establish such direct relations have broken down on account of this difficulty.

It would appear that the foregoing reasons are sufficient to prove the need of a set of intermediary dealers between country shipper and city retail stores. Some of these difficulties can be overcome to a certain extent by better marketing methods at country points, by better packing and grading, and by greater uniformity in variety of crops raised by farmers, and direct shipment will probably increase to a certain extent, especially with large retail stores, but the conditions are such that the great bulk of farm products will necessarily have to pass through the wholesale "reservoir" before they can be distributed among retail stores.

Functions of Wholesale Middlemen. — The considerations outlined above suggest the functions performed by wholesale middlemen. The tasks to be performed vary to such an extent, according to the commodity handled, that a general statement of these functions is not altogether satisfactory, but having in mind primarily those products which pass from farmer to consumer in approximately their natural state, *i.e.* without being altered to any great extent by a manufacturing process, the functions of wholesale middlemen may be broadly summarized as follows:

1. To establish business connections with country shippers, often through personal solicitation.

2. To furnish facilities for handling and storing goods which arrive from the producing sections in large and varying quantities, and to deal them out according to the desires of the consuming public. Storage is necessary both for short periods to regulate the daily flow of commodities and for long periods to preserve from seasons of flush production to seasons of scant production.

3. To sort out the miscellaneous goods according to quality, size, style of package, etc., and often to repack and otherwise prepare for market.

4. To study the needs of the retail trade and to establish business connections (through personal solicitation) so as to furnish each retail store with the quantity, quality, style of package, etc., demanded.

5. To deliver to retail stores from day to day in extremely small units, and at a few hours' notice, because, as has been pointed out, the retail store carries a great variety of products and can handle only a little of each commoditv at a time.

6. To finance both country shippers and retail stores, by allowing the former to draw drafts at time of shipment, and by allowing the latter to run their bills for a considerable length of time.

7. To become experts on market conditions and commodity prices, and through their dealings with wholesalers in other cities to regulate the flow of commodities among the various markets.

8. To furnish the business machinery which is essential to proper accounting for huge quantities of goods of great aggregate value.

In other words the wholesale trade as a whole acts as a great reservoir into which carloads and even trainloads of commodities of every possible size and description are continually dumped; and from which they emerge in hundreds and even thousands of tiny streams, each stream made up of a well-regulated flow of commodities carefully selected according to the individual needs of the various retail stores. A mere enumeration of these functions gives the layman an inadequate idea of the real difficulties and complexities of the wholesale produce trade; first-hand and impartial investigation alone will give him a sane point of view in considering the problems connected therewith. Defects certainly exist in the system just as in manufacturing and in farming, but the dispassionate investigator will be struck more by the high degree of efficiency that has been attained under difficult conditions, than by the weaknesses that he is able to discover.

Distribution of Goods among the Various Markets. — One of the functions of wholesale middlemen, as indicated

above, is that by studying market conditions and by keeping in touch with dealers in other cities, they regulate the flow of commodities among the several markets in accordance with their needs. One of the commonest criticisms of the marketing system is that this adjustment between markets is not well regulated, that there are frequent gluts and scarcities, and that the gluts often result in heavy losses to growers. Instances where carloads of perishables have been "dumped into the river," or where the returns were hardly sufficient to pay the freight bill have been cited so frequently by writers on marketing that one might think this an ordinary occurrence, and that the marketing system is so defective that a large part of each year's crop is lost in this manner.

It is true that there is much room for improvement in the distribution of foodstuffs among the various markets, but the popular opinion on this subject is without foundation. In the first place serious gluts and scarcities occur only in the marketing of a few highly perishable and seasonal commodities, and not in the marketing of the great staple farm products, such as grains, live stock, poultry, butter, and eggs. Wholesalers make a close study of prices and market conditions not only in their own market but in all the other leading markets of the country. When the wholesalers in any one market find that there is a scarcity in that market, and that prices are beginning to rise, they immediately begin to buy in other markets, so as to increase the receipts. They will find dealers in the other markets who are ready and anxious to make sales. Through the constant interrela-

tions between markets, the price levels are kept in such perfect adjustment as to control with surprising effectiveness the distribution of goods among the various markets. Wheat furnishes perhaps the best example of this even distribution among markets. There are dealers in each of the great primary markets who make a specialty of watching prices in other markets, and of buying wheat in one market for shipment to another. This adjustment of wheat prices is also greatly aided by buying and selling futures in different markets at the same time (see Chapter XVI). Through this continual adjustment and readjustment, the prices in different markets are kept in such delicate balance that the wheat crop moves from producing sections to consuming centers in a well-regulated and almost automatic flow without alternate gluts and scarcities in individual markets. Practically the same results are achieved in the marketing of the other great staples. The various markets are kept " in line " with each other to a remarkable extent, and when one shows the slightest indications of a scarcity or surplus, dealings with sellers or buyers in other markets immediately bring it back in line. This automatic distribution of farm products among the various markets is one of the most interesting features of the whole marketing system.

But such delicate price adjustments are not possible for all commodities — especially those that are highly perishable, and that are produced in large quantities during a very short season. The Georgia peach crop, for example, consists of thousands of carloads which have to move to market within a space of about six weeks. If

one market becomes overstocked, the goods may spoil before they can be sent to another market. There is no delicate adjustment of prices of Georgia peaches in different markets. If the crop is very large and matures in an unusually short time, there may result a glut in all markets. In fact this is very apt to be the case when we hear of losses to shippers on account of overstocked markets.

Diversion of Car Lots in Transit. — In the case of highly perishable fruits, market conditions change rapidly in the different cities, and either a glut or a scarcity is likely to develop in a relatively short time. To obviate this difficulty there has developed a system whereby carloads of fruit may be diverted while in transit to the markets where conditions are most favorable. This method is commonly employed in marketing California fruits; agents of the shippers located in eastern markets report from day to day on the conditions and prices in their respective markets, and fruit which is in transit is diverted at such points as Council Bluffs, Iowa, or Minnesota Transfer (between Minneapolis and St. Paul) to the markets where conditions are the most favorable. Scattered shippers of small lots cannot obtain such service as this; the most effective way to make use of this diversion privilege is through an organization of shippers, although individual shippers of car lots may often get a broker or commission man in some distant market to attend to the steering of his consignments into the most remunerative markets. A recent report of the United States Department of Agriculture gives the following descrip-

tion of the use of the diversion privilege by shippers in the Southern states.[1]

"Other important instances of this practice of diverting a consignment en route are afforded in the movement of fruits and vegetables from Southern States. A commission firm, whose head office is in Pittsburgh, Pa., distributes its marketings in this way. On receipt of a telegram, say, from a Georgia shipper, announcing that he has a car ready to move, the head of this firm decides at once the general direction for the car to go. If the West promises the best markets for the next several days, the shipper may be notified to consign to Cincinnati, or if the car is to go to an eastern city, the consignment may be made to Potomac yard, a freight transfer point on the Potomac River opposite Washington, D. C. At each of these diversion points a representative of the commission firm opens the cars, inspects the contents, and reports the results by telegraph or telephone to the Pittsburgh office, which is kept informed of market conditions in different cities. The agent at the diversion point will then receive orders as to the final destination of the car. Among the diversion points used for shipments of produce from the southwest are Kansas City, St. Louis, and Chicago."

The improvement of the present system of distribution among the various markets must be sought through a wider use of diversion in transit, combined with a more complete system of gathering and disseminating prompt and accurate market reports. Information with regard

[1] G. K. Holmes, Systems of Marketing Farm Products, Report No. 98, U. S. Department of Agriculture, p. 17.

to receipts of fruits and perishable vegetables at various markets, quantity in transit, market prices, etc., is not adequate at present, and shippers often have to rely on the advice of private commission firms, some of whom give out misleading information as to prices and trade activities in order to attract consignments to themselves. One obstacle to the shifting of commodities from city to city in accordance with changing market conditions is found in the varying desires of different markets for special qualities or styles of package. For example, only white potatoes are desired in Chicago, while the red varieties are in demand in the South; California wants white varieties of asparagus shipped in bulk, whereas eastern markets want green varieties packed in bundles; Boston demands dry-picked poultry, whereas southern markets take scalded poultry; some markets prefer sweet potatoes packed in barrels; others prefer them packed in bushel hampers or boxes. This variation in the preferences of different markets is likely to continue and possibly to increase in the future, and this factor must be kept in mind in solving the problem of distributing crops among the various markets, because when commodities have been packed or selected for consumption in one city, it may be impossible to divert them to some other city.

Development of the Wholesale Produce Trade. — In general, it may be said that a city is large enough to require a separate wholesale trade organization when it can handle goods in car lots for consumption in the city or for redistribution to near-by towns. The number of such cities is steadily increasing. It has been said that a city

of 25,000 inhabitants can consume within a few days a carload of one or more kinds of highly perishable fruits or vegetables.[1] The same authority states that one of the large merchant shippers of Jacksonville, Florida, claims that car-lot shipments of Florida produce were made in 1912 to 210 different cities located in 46 states. The consumptive power of a city varies of course for different commodities, and it was found in 1910 that out of 103 cities in the United States that reported car-lot receipts, there were 87 mentioned as car-lot markets for peaches, 86 for watermelons, 77 for cantaloupes, 71 for strawberries, 66 for tomatoes, 53 for grapes, 13 for cherries, 11 for cucumbers, 11 for green beans, and 11 for apricots. There were also about 25 other commodities for which from one to ten different cities had car-lot markets. These figures do not represent the total number of cities in the country that furnished car-lot markets for the commodities enumerated.

When a town becomes large enough to consume commodities in carloads, it frequently happens that before any permanent dealer establishes a wholesale business, an individual grower or shipper will bring a carload of produce to town, sell out his goods to the retail merchants, and depart. The retailers go to the car and inspect the goods, make their purchases, and haul them to their stores themselves. A specific example of this occurs among the small cities on the Iron Range in Minnesota, where occasional carloads of potatoes and apples are brought in by growers or dealers from Wisconsin or

[1] Andrews, F., *Annals of the American Academy*, November, 1913, p. 3.

Minnesota.[1] This is a form of temporary or occasional wholesale trade, and in a growing country indicates an early development of a permanent wholesale trade.

The next step in the development of wholesale trade is likely to be a branch office of a wholesaler in some large city that has already developed a direct trade with the retail stores; or it may be that one of the larger retail stores orders goods in car lots and sells what it does not need to the other stores, thus developing, perhaps with no definite intention of doing so, a wholesale department of its business. When the business becomes large enough to warrant it, dealers who do nothing but a wholesale business begin to appear. But such dealers ordinarily handle a great variety of products, and sell direct to the retailers. It is not until the city becomes much larger that the two kinds of specialization described in Chapter I begin to develop — first according to commodities, such as dealers who specialize in butter and eggs, or fruits and general produce, and later according to functions, whereby one set of dealers acts as receivers of car lots, and another set develops the trade direct to retail stores. It is not until the very largest cities are reached that such specialists as brokers, auction companies, cold-storage warehouses, etc., are found necessary.

The wholesale trade of a large city does not depend simply on trade within the city for its business; it ordinarily distributes to retailers in small towns and cities within a considerable radius. Many wholesale houses maintain separate departments to handle this

[1] Weld and others, Studies in the Marketing of Farm Products, University of Minnesota, Studies in the Social Sciences, No. 4, p. 110.

out-of-town business. In the western half of the country where large cities are few and far between, the wholesale dealers often send perishables in small lots to retail dealers hundreds of miles away. This is true of the wholesalers in Minneapolis and St. Paul, for example, whose business with retail stores in all parts of Minnesota, and even in North Dakota, is very important in the aggregate. It is only natural that such dealers should gradually tend to establish branch houses in the larger towns, to which they may ship in car lots, and redistribute from such branches to the small towns in the vicinity.

General Characteristics of Wholesale Trade. — Another feature of the organization of the wholesale trade is that in large cities, especially those near the principal agricultural sections, there are two general classes of wholesalers, — one that collects products from distant regions for redistribution within the city and the adjacent territory, and the other that collects the products grown in the adjacent territory, and redistributes them to other parts of the country. In Minneapolis, for example, there are wholesalers whose principal business is to bring fruits and vegetables from California, Texas, and all other parts of the country for distribution in Minneapolis and throughout the Northwest. On the other hand, there is the wholesale grain trade which collects the products of the Northwest for distribution to other parts of the country and world, and there are the potato dealers, who collect Minnesota potatoes for shipment southward.

The characteristics of the largest wholesale markets

depend largely on whether they are primarily consumptive or terminal markets, or whether they are important as redistributing markets. The wholesale trade of New York City, for example, is mainly concerned with the collection of commodities from all over the world for distribution within the huge city itself. It is true that the dealers in New York City redistribute to a certain extent in New Jersey, northeastern Pennsylvania, New York State, and New England, but this part of New York's trade is undoubtedly becoming relatively less important as compared with the city trade, and perhaps decreasing absolutely because of the development of well-organized wholesale trades in large cities even a few miles from New York. Chicago, on the other hand, is largely a redistributing market. Located in close proximity to great agricultural regions, products enter the city in vast quantities, greatly in excess of the requirements of the city, and even of its adjacent trade territory making the city by far the greatest redistributing market for agricultural products in the country. A large proportion of the receipts of farm products in Chicago is sent to eastern interior cities and to cities throughout the South. Chicago's relation to other cities is somewhat analogous to the relation between a single wholesale receiver in a large city and the numerous jobbers within the same city.

In cities like New York, and other seaboard cities, which are primarily consumptive markets, the wholesale trades, although intricate enough to satisfy the most persistent investigator, have developed along relatively fixed and definite lines. The channels of trade are fairly well marked, and one can analyze without great

difficulty the methods and practices of the marketing system. In a city like Chicago, on the other hand, the marketing machinery becomes more complex. Various kinds of specialists appear that are not found in the smaller markets. The channels of trade are so numerous and so diverse — largely on account of the shipping business — that a single dealer handles goods in such a variety of ways, and sells to such a variety of functional specialists — that the situation well-nigh defies the keenest analyst. Furthermore, some of the middlemen are gradually altering their ways of doing business; a few are undertaking new functions; others are narrowing their fields of activity to a smaller range of functions. It requires weeks of first-hand, intimate study for the outsider to begin to understand — to get under the surface of — South Water Street.

Localization of Wholesale Districts. — The wholesale produce trade in any one city is always highly localized, *i.e.* the dealers establish themselves in some single section of the city. In the largest cities, there are often one or more subsidiary centers. In New York City, for example, the principal wholesale district is located on the lower West Side in close proximity to the wharves. Subsidiary sections are found near West Fourteenth Street, in Harlem, in the Bronx, and at the Wallabout Market in Brooklyn. The great bulk of the goods arrives in the city at the wharves on car ferries or on steamships near the down-town wholesale section, and are trucked from there to jobbers in the other sections.[1]

[1] See Report of the Mayor's Market Commission of New York City, p. 16 ff.

It should be noted particularly, however, that when a city contains two or more wholesale districts one of the districts invariably receives the great bulk of farm products reaching the city, and the other or others are jobbing centers which receive their products largely from the great receiving section. Distant shippers desire to send their products to the largest wholesale section where they believe the largest number of buyers congregates; likewise, large city buyers are apt to neglect the subsidiary markets and go to the section where goods arrive in greatest quantity and variety. In other words, the tendency toward a concentration of the receiving business in one all-important wholesale district tends to perpetuate itself. This fact is not fully realized by those who are urging the establishment of numerous public wholesale markets in our large cities, so as to hasten and economize the marketing process.

The locations of wholesale districts are determined principally by proximity of transportation terminals — either past or present. The wholesale trade of Chicago was located on South Water Street largely because at one time a large proportion of the farm produce was brought to the city by boat. Now that the railroads bring in the great bulk of the produce, South Water Street is poorly located. Furthermore, the great city has grown up around this section to such an extent that property in South Water Street has become very valuable, and rents are high. With the development of the business in farm products, this district has also become greatly congested, and is often referred to as the busiest street in the world. There probably is no other street where the

warehouses are so full, the sidewalks so covered with boxes and barrels of merchandise, and the streets so filled with wagons. A secondary market, the one in West Randolph Street, long ago became necessary, and at time of writing there is a movement on foot among the dealers in South Water Street to relocate in a more favorable section of the city.

Similarly, the markets on Dock Street in Philadelphia, Pratt Street in Baltimore, Walnut Street in Cincinnati, and Third Street in St. Louis are located near water fronts where fruit and produce were commonly received by boat before modern transportation facilities developed.[1] Other produce districts are located close to railroad terminals, as the wholesale trade near Thirty-second Street in Philadelphia, and Penn Avenue in Pittsburgh. In some cases, the proximity of public retail markets appears to have had something to do with determining the locations of wholesale sections. The market place in Minneapolis is owned by private parties, who also own the land and buildings near by that are occupied by wholesalers. The owners claim that they operate the market itself at a loss, but that the rents from adjoining property are made relatively higher by the presence of the market place.

Localization not only occurs with regard to wholesale districts as a whole, but the dealers in different commodities also tend to segregate within the general wholesale district. In New York City the butter and egg dealers are located within three or four blocks, beginning

[1] Andrews, F., *Annals of the American Academy*, November, 1913, p. 3.

at Chambers Street and running north. The handlers of poultry, of citrus fruits, of bananas, of vegetables, are all more or less segregated within the general section. The dealers in wheat and cotton are still more highly segregated — not, however, within the same general produce district, but in relatively close proximity. The larger the city, the greater the degree of specialization by commodities, and hence the greater the localization of trades.

Some of the serious faults found with city wholesale systems are that they are often poorly located both with respect to transportation terminals, and with respect to the consuming population. Trucks often have to wait in line along the wharves in New York for hours awaiting their turn to get their goods and make deliveries. New York City is a long, narrow island, with the wholesale district located near the southern end. It was believed when the city was laid out that the principal avenues of trade would be from river to river — east and west — and hence the cross streets were laid out near together, and the few avenues running north and south, far apart. Since the city has developed to such an extent toward the north, the heaviest travel for both men and goods is along the few avenues, which are insufficient to accommodate the heavy traffic comfortably. Hence the earliest development of elevated railroads, and the most elaborate system of subways of any city in the world. Farm products arrive in train loads at the railroad freight terminals at the southern end of the city. The wholesalers assemble them, provide storage, sort them, and deliver them to all parts of the city, having to use the congested north-and-south avenues for the bulk of their hauling.

Undoubtedly the situation can be relieved, and as the city continues to grow, better facilities will be absolutely necessary. But those who think that the problem of food distribution in New York City is, or should be, easy, because the city is surrounded by water, little realize the complexities and necessities of the wholesale produce trade, and they little realize the success and expedition achieved by the dealers in moving the train loads of perishables that arrive on any one day into their respective channels in time to make room for the train loads that arrive the following day. To accomplish this feat, many of the toilers in the produce trade begin their work at an hour in the morning when Broadway revelers are just going to bed; and, as will appear in the chapters on Cost of Marketing, the wholesale trade takes out such a small slice of the total margin between farmer and consumer, that the casual critic of the marketing system would do well to consider the facts more carefully before he presumes to inform the dealers or the public how the thing should be done or how it should be reorganized. The writer has no personal interest in the produce trade or in the men who are engaged in it, but he has found that in spite of congestion, high rents, long hours, etc., they accomplish what they set out to do, and at a remarkably small cost and profit per unit handled. Until one has gone far enough into the subject to realize these things, he is not exactly in a position to tell the public what the weaknesses of the present system really are, or what remedies should be applied to correct these weaknesses.

CHAPTER V

MIDDLEMEN OF THE WHOLESALE PRODUCE TRADE

Confusion of Terms. — In considering specifically the different kinds of wholesale middlemen we encounter a perplexing confusion of terms used to designate the different dealers. This confusion exists not only as regards the nomenclature used for dealers in different markets, but also in different trades in the same market. In fact there is often more or less confusion even in a single trade in the same city. This is largely the result of changing conditions; a class of dealers will develop, and become known by a fairly definite name; then this set of dealers gradually changes its methods of doing business, perhaps by taking over new functions, until the original name, which ordinarily continues to be used, loses its significance, or even becomes altogether misleading. Thus we have dealers in the butter trade in Chicago who are called "brokers," but who in reality are no longer doing a strictly brokerage business.

A still further complicating feature is that certain firms sometimes change their character more completely than other firms; some still cling to the original methods of doing business, and the old name still fits; others are doing part of their business under the old methods, and part under the new; while still others have changed so

completely that, although they are still known in the trade by the original designation, they may be performing functions quite different from those their name implies. Another reason for confusion in terms is the fact that the wholesale businesses of different cities have developed along different lines according to size of city and to general nature of the business handled, thus causing the development of specialized dealers in some cities that are not found in others.

Perhaps the greatest confusion persists with regard to the meaning of "commission man." As will be pointed out below, when the wholesale produce business first developed, commodities were handled very commonly on a commission basis, and there came to be a fairly definite class of dealers known as commission merchants. In fact it came about that all wholesale dealers were called "commission men," — a difficulty that persists to-day in spite of the fact that many of the dealers have so changed their methods of doing business that the term no longer technically belongs to them. The frequent use of this term also leads to a general belief that the true commission or consignment method of sale (described in Chapter III) is much more prevalent than it really is. One result of this misunderstanding is seen in the present agitation for state laws to regulate the handling of farm products on commission — not that such laws are not needed, but that they fail to reach many of the dealers and practices that the framers have in mind. In Minnesota, for example, frequent complaints are made by shippers concerning specific shipments on which the returns have not been satisfactory. On examination,

the Railroad and Warehouse Commission, to whom is entrusted the enforcement of the law, finds that the shipments in question were bought outright by the receiving wholesaler, and not handled on a commission basis at all. In such cases, the law is inoperative, the Railroad Commission has no jurisdiction, and the shipper has no recourse under the law governing commission merchants.

Confusion also exists in connection with the use of the terms "wholesaler" and "jobber." "Wholesaler" or "wholesale dealer" frequently has no special significance, and may mean almost any class of dealers in the wholesale trade, although as we shall see below, it is better to confine the term "wholesaler" to a specific meaning. Jobber is also sometimes used indiscriminately and the whole class of dealers is commonly referred to as "wholesale jobbers." The term "jobber" is said to have originated as a term applied to dealers in the wholesale manufactures trade who had no regular customers, but who made a business of buying up odd lots or "job" lots as opportunity offered, and selling them out to whomsoever would buy. Possibly the term at one time had some such significance in the wholesale produce trade, but it has no such meaning to-day.

Definition of Terms. — In spite of the great confusion that exists in the use of terms, there are certain classes of dealers who have fairly well defined functions, and who may be designated by fairly specific terms. The nomenclature adopted below, however, is more or less arbitrary, and may not be acceptable to all students of marketing. A standardization of trade terms is highly desirable for general reasons; a definite under-

standing as to the meanings of terms used in this treatise is essential so that the reader may have a clear idea of the positions occupied by the various dealers in the general marketing scheme, and the functions performed by them.

It is well to confine the term "commission man" to the dealer who receives goods direct from outside shippers and who handles them on an actual commission or consignment basis. He does not become the owner of the goods he handles, but merely acts as an agent of the shipper, deducting from the gross receipts either a certain percentage or a definite charge per package or per unit of measure, to repay him for his troubles. For the dealer who receives goods direct from the country but who *buys them outright*, a convenient term to use is simply "wholesaler" or "wholesale receiver." The latter has perhaps a more specific meaning, because the term "wholesaler" is commonly used to mean any dealer in the wholesale trade. Both commission men and wholesale receivers are "first-hand receivers" from the country; the commission man, however, merely acts as an agent of the seller, whereas the wholesale receiver buys outright, thus becoming the owner of the goods, and assuming the risk of profit or loss which depends on his ability to sell the goods for more than he paid for them. Confusion arises from the fact that very frequently a first-hand receiver acts both as a commission man and as a wholesale receiver. When this is the case, the terms as used hereinafter will be understood to apply to the dealer either in the one capacity or the other, as the term indicates in each case.

By " jobber " will be meant those dealers who buy from the first-hand receivers (either commission men or wholesalers) and sell to the retail stores, or other retail outlets such as fruit stands, push-cart men, hotels, restaurants, steamship companies, etc. Here again, there is no standard usage, although this restriction of meaning appears to be gaining ground. In some places, jobbers as defined above are called " retailers " because they sell to retail stores! Also, some jobbers, especially those who do not have established places of business, are called " wagon men," because they load their purchases from wholesalers and commission men into wagons, and peddle them around among the retail stores. In many cases, especially in smaller cities, the first-hand receivers sell direct to the retail trade without the intervention of the jobber. Such a receiver is often said to do his own " jobbing." In other words, the term signifies the selling of small quantities to retail stores.

" Brokers " are usually also first-hand receivers, similar to commission men, but they ordinarily handle goods in larger quantities, charge smaller fees for their services, and perform fewer services in general. The functions of this class will be brought out more clearly in the following chapter. " Shippers " and " exporters " are dealers who buy goods in one market for shipment to another. By " scalpers " or " speculators " is ordinarily meant men who buy in one market for resale in the same market. Among other wholesale dealers are cold-storage companies and auction companies, whose names indicate their functions. These various dealers will now be described more in detail.

Commission Men and Wholesalers. — It has already been mentioned that the commission method of sale was especially common in the early days of the wholesale trade. The principal reasons why dealers handled on commission rather than buying outright from country points were as follows[1]: goods as shipped from the country were of much more heterogeneous character as to quality, variety, and method of packing than they are to-day; transportation facilities had not been developed so as to carry perishables without frequent deterioration and decay; and trade methods and facilities for gathering and disseminating market information in wholesale markets were not sufficiently developed to allow wholesale traders to measure or forecast market conditions. For these reasons, the outright purchase of commodities in large lots by dealers in cities involved too great a risk, and this risk had to be shifted back to the grower or country shipper.

Gradually, it has come about that a greater and greater proportion of country shipments have been bought outright or " taken on account " by the first-hand receivers in the large cities. The reasons for this tendency appear to be threefold: First, the general improvement of marketing methods. There has developed an improvement in quality, method of packing, etc., thus eliminating some of the risk which made it impossible for city dealers to buy outright. Transportation facilities have been revolutionized, especially through the use of the refrigerator car, and trade conditions in the cities have improved, partly due to the development

[1] See Thompson, *Annals*, November, 1913, p. 58.

of price-quotation systems, and expert market-reporting methods. For these reasons the risks of marketing have been reduced, and the city dealers have been able to assume some of the remaining risks.

Second, pressure on the part of shippers has tended to encourage outright purchase. It has been pointed out that shippers and growers are generally opposed to the consignment method, and hence they have attempted to find dealers who would be willing to purchase outright. And third, competition among traders in the wholesale markets has hastened this tendency. Jobbers frequently try to go over the heads of commission men and buy direct from the country. Since outright sale appeals to country shippers, commission men, to protect themselves, have had to offer the inducement of outright purchase in order to get business, and competition among commission men themselves has tended to bring this about. The desire to get additional consignments, or to hold old consignors, has led many to guarantee a certain minimum rice. If such price was not obtainable on the day of rrival, the dealers were obliged to take the goods on ccount themselves. For these three reasons the commission men have largely become wholesale receivers who ctually merchandise the goods they handle instead of urning them over on a commission basis, although as lready pointed out, many receiving houses have only artly changed their character in this respect and do usiness in both ways.

Commission Business Still the Rule in Some Trades. — There are exceptions, however, to the general tendency from the commission basis to the outright-purchase

basis. In the first place, very perishable products, like watermelons, cantaloupes, etc., are still largely handled on a commission basis in the large cities. The hazards connected with transportation over long distances are still too great to make receivers willing to undertake the risk of actual ownership of large quantities. In those trades where the change is most pronounced, old established houses may be found who still specialize on the commission method of sale. Their reputation obtained through long years of honest service to satisfied and regular shippers enables them to continue to receive consignments.

In some special trades the commission method still continues as the predominant method of doing business, as for instance in the marketing of live stock and grain. Live stock is almost universally marketed by consigning to commission men located in the large live-stock markets, and this method appears to be satisfactory to all concerned. The great bulk of the grain marketed from the Northwest is sold in Minneapolis or Duluth on a commission basis. In other important grain-growing sections there has been a tendency for primary-market dealers to buy "on track," but large quantities of grain are still sold on consignment in Chicago and Kansas City. The reasons for the satisfactoriness of the commission method in these two important trades are as follows: first, market values of live stock and grain are definite and widely known, so that the shipper can tell whether he is getting all that his product is worth; second, buying and selling of these commodities occur continuously during certain hours each day in a definite

market place, so that a commission dealer can always be sure of finding some one to buy at the market price; and third, the commission dealers themselves are organized into associations or exchanges which adopt and enforce rules to prevent unbusiness-like practices.

Abuses Resulting from Changing Methods of Commission Merchants. — This change from the commission basis to the outright-purchase basis has been attended by some objectionable features. Because dealers act in the dual capacity of both commission men and wholesalers, it is often impossible for a shipper to know on what basis his goods are being handled. It frequently happens that a commission man sells part of a consignment on commission, and takes the remainder on account. When a dealer takes consigned goods on account, he is of course able to set the price as he pleases. In doing so, he is actuated by two conflicting motives: first, to take them at as low a price as possible so that he can make a good profit; and second, to make as high a return as possible to the shipper and thus induce him to continue his consignments. When a dealer has for sale both consigned goods and goods that he himself owns, the natural tendency is for him to give his own goods the preference when an advantageous sale offers itself. In the grain industry, there are many firms that handle consignments and at the same time purchase grain on track in the country, which they have to sell in competition with their consignments. Firms that stick to a straight consignment business often make use of this fact in soliciting consignments. A St. Louis grain firm, for instance, advertises in one of the trade papers as follows: "We

make no track bids, therefore your consignments do not conflict with our purchases."

The possibility of taking consigned goods on account is usually disadvantageous to shippers because commission men have it in their power to handle the goods in whichever way they please. On a gradually rising market, the commission man is more apt to buy the goods outright so as to get the profit from merchandising the goods himself. On a falling market, however, the commission man is more apt to handle on a strict commission basis, not caring to run the risk of loss involved in becoming the actual owner of the goods. In some trades where the dealers are well organized, they have passed rules forbidding commission men to take consigned goods on their own account. In such cases there is still the possibility of selling to some other company under a secret agreement, but it must be remembered that where dealers are specializing on a straight commission business, their very life depends on their ability to satisfy shippers so as to get their consignments, and there is usually very keen competition among the different dealers for such consignments.

The difficulties along this line are made more complicated by the fact that commission men frequently charge commissions to the shipper just the same whether they sell on a consignment basis or take the goods on account. In other words, they often charge a commission on their own purchases! The shipper generally cannot tell from his account of sales to whom his goods were actually sold or whether the commission man bought them himself. As reprehensible as this practice

may seem at first blush, it does not necessarily imply dishonesty on the part of all commission men who use it, because oftentimes the commission charged and the price at which the goods are taken on account may be so adjusted as to yield the dealer only a fair margin of profit. The practice is a dangerous one, however, because so open to abuse, and it should be prohibited. It would be well if laws governing commission merchants should specifically prohibit the charging of a commission unless the goods are actually sold on a consignment basis.

Illustrations from the New York Butter Trade. — The history of the wholesale butter trade in New York illustrates in an instructive way the change from the commission basis to the outright-sale method, and also certain curious practices with regard to the continuation of charging commissions when goods are really taken on account.[1] In the early days, the first-hand receivers acted as commission men, pure and simple, selling to jobbers, and making returns to shippers only as goods were sold, deducting a 5 per cent commission. Competition was keen among the commission men, and one form that this competition took was to strive to outdo each other in the promptness of returns made to shippers. Obviously, when they waited until the goods were actually sold, there were frequent delays in making returns. This competition led them not only to guarantee prompt returns, but sometimes led them to make returns before the goods were actually sold, making up the account of

[1] See Urner, F. G., in *New York Produce Review and American Creamery*, December 24, 1902, and August 15, 1906.

sale at a price which they believed they could procure. From this, the next step was to guarantee definite prices based on market quotations (as explained in Chapter XIV), and thus it came about that the commission men became actual dealers with respect to all goods handled under a guaranteed price, but continued to act simply as commission men with respect to the rest of their receipts. During recent years, this change has come about so completely that the large butter receivers of New York act primarily as wholesalers and only incidentally as commission men.

But with this transition, many of the firms have continued to charge commissions, even though they become the actual owners of the goods. It is obvious that if the price guaranteed to the country creamery is to be subject to the deduction of a 5 per cent commission, the wholesaler can guarantee a higher price than if the butter were to be handled on a net basis. For example, a wholesaler receives a lot of butter on a certain day, on which his guaranteed price amounts to 30 cents (dependent on the quotation of that day). He makes out his returns at 30 cents, and deducts a commission of 5 per cent, leaving a net price paid by the wholesaler of 28½ cents. He sells it the next day for 29 or 29½ cents. In other words, the 30 cents is a purely fictitious price, made possible by a fictitious or unreal commission.

The principal object of this device is to make the guaranteed price look as high to the country shipper as possible. There is something fascinating to the country buttermaker in Minnesota and Wisconsin in being able to claim that he is receiving a cent and a half over the

New York quotation, delivered at New York, but this boasted price means absolutely nothing until we find out whether it is subject to a deduction of a 5 per cent commission. Most of the buttermakers and creamery managers themselves understand the situation, although many think that their butter is really sold on commission, but the farmer patrons of these creameries are often misled into believing that their creameries are getting higher prices for their butter than they really are. It is sometimes amusing to hear a farmer boast that his creamery is receiving " one cent over New York," and that the creamery at the next station is getting only a " half cent under." Such statements mean nothing until the terms of the arrangements are known. It may be that the creamery at the next station is paid its price on track and hence subject to no deductions even for freight, so that it may be getting a greater net return than the creamery which is ostensibly receiving one cent over the quotation. Much of the fine butter of the 614 coöperative creameries of Minnesota is still marketed on this commission basis, but the tendency is more and more toward a " net " basis of payment, and this method should be encouraged. Some of the leading New York houses have abandoned the 5 per cent commission altogether, while others still use it because they say that the creameries demand it.

The Size of Commissions. — The commissions charged by dealers vary greatly for different commodities in different markets, and according to the ordinary size of unit handled. They are usually expressed as a percentage of gross returns, but sometimes as a flat rate per package or per piece or per unit of measure. Figured

on a percentage basis, commissions vary all the way from less than 1 per cent up to 15 per cent. The commissions are lowest for the great staple commodities which are handled in car lots, and sold through organized market places where buyers and sellers are in close proximity to each other.[1] The usual commission charge for selling wheat is one cent a bushel, which is less than 1 per cent when wheat is worth over one dollar a bushel. The commission for selling a carload of steers at South St. Paul is twelve dollars, which would figure at less than 1 per cent on a value of more than $1200 a car (not at all unusual).

In the butter trade, the usual commission (when handled on the consignment basis at all) is 5 per cent, although in the larger markets there is a tendency to cut this rate. In New York City, for example, some commission men charge 45 cents per tub (three fourths of a cent per pound, or about 2½ per cent). In the fruit and produce trade, where highly perishable commodities are handled, the commonest rate is 10 per cent, although there has been a tendency for this rate to be reduced, especially for commodities handled in large quantities. On fruits that are sold at auction, the commission firm frequently takes only 5 per cent (the auction company taking from 2 to 3 per cent on the average in addition, as explained in Chapter VII), because it costs commission men more to sell goods at private sale than to turn them over to an auction company. The perishable consign-

[1] The variations in commissions depend largely on the same factors that affect the variations in total costs of marketing, discussed in Chapter IX.

ments of large shippers, however, are frequently handled for 7 per cent (sometimes under contract) whereas small shippers of similar commodities may be charged 10 per cent. Fifteen per cent is charged but rarely, and only on small shipments that require an unusual amount of care.

It would be interesting to be able to compare these commission rates with the business expenses of the commission men if adequate figures were available. In general, it may be said that it is the cost of doing business on which the commission rates for different commodities are based, and that on the whole, competition tends to reduce the rate to a point so near this minimum that it is only on a large volume of business that respectable profits may be made. It is said that the expenses of a large wholesale produce dealer in a city like Chicago amount to about 6 or 7 per cent of gross sales. When such a dealer engages largely in the business of shipping small lots to stores in neighboring cities and towns, the expenses are higher. In the butter and egg trade, the expenses of a large wholesale receiver or commission merchant may be only between 2 and 3 per cent. If such a dealer engages in the jobbing business, *i.e.* sells direct to retail stores, the expenses are much higher. In the grain business, the statement is commonly made that on a fair-sized business, the expenses consume about one half the commission, thus leaving a profit of one half cent a bushel in the case of wheat.

Uniform Commissions in Grain and Live-stock Trades. — Ordinarily commission dealers have no definite agreements as to the commissions to be charged on different products, although it naturally comes about in most

trades that a uniform commission is charged. There is nothing to prevent a dealer from diverging, however, from the rate that has been adopted by trade custom (except as cited below). The ordinary rate of 10 per cent in the general produce and fruit business is frequently cut, especially on consignments from heavy and regular shippers. The National League of Commission Merchants took up the question of adopting uniform commissions and appointed a committee to consider the subject at its 1914 convention. This committee reported at the convention in 1915 that uniform commissions would be impracticable, and the report of the committee was accepted. Although the possibility of varying the commission undoubtedly results in some uncertainty, goods are handled in such a variety of ways and in such fluctuating quantities that it would be difficult to adopt and enforce just uniform rates. It should be noted that when usual rates are diverged from, the tendency is to lower them rather than raise them.

In some trades, however, especially grain and live stock, the commission dealers through their organizations have adopted uniform rates of commission, and take particular pains to see that these rates are enforced. In the grain trade, the rules of the exchanges set minimum rates of commission to be charged. The setting of a minimum is tantamount to establishing a uniform commission, because the object of such rules is to prevent the cutting of rates, rather than of raising them. The rules of the Minneapolis Chamber of Commerce are typical in this respect. They establish minimum rates of commission to be charged by members for selling the different

grains, for buying grain on order, and for executing orders for purchases or sales for future delivery. Members are allowed to charge lower rates when performing these services for members than for non-members.

Specifically, the rates of commission established in Minneapolis for members receiving grain from non-members are one cent per bushel on wheat, barley, and rye, three quarters of a cent on corn, one half cent on oats, and on flax seed, 1 per cent of gross proceeds. When selling for members, the rates are one half cent per bushel on wheat, corn, and rye, three fourths of a cent on barley, three eighths of a cent on oats, and one half of 1 per cent on flax seed. The rate allowed for buying for non-members is one cent per bushel on wheat, barley, and rye in lots of 5000 bushels or less, and one half cent in lots of over 5000 bushels. When buying for members, the rates are cut in half. The commission allowed for executing orders for non-members to buy or sell wheat for future delivery is one eighth of a cent per bushel, and for members, one sixteenth of a cent. This detailed statement of rates illustrates how they vary for different grains and for different conditions under which they are handled.

The live-stock exchanges fix commission rates for selling the different kinds of live stock under varying conditions. The South St. Paul Live-Stock Exchange, for example, establishes rates for straight cars, and for mixed cars; for cars not exceeding thirty-six feet in length, and for cars exceeding that length; for single-deck cars and for double-deck cars. The commission on straight cars of cattle (cars not exceeding thirty-six feet

in length) is fifty cents per head, but not less than ten dollars per car nor more than twelve dollars per car. For straight cars of hogs the rate is eight dollars per single-deck car and twelve dollars per double-deck car.

Reasons for Uniform Commissions. — The establishment of uniform commissions is sometimes objected to on the ground that it constitutes conspiracy in restraint of trade. This feeling against the "commission rule" of the grain exchanges has been especially noticeable in the Northwest. Commission merchants of the grain exchanges are keen competitors for country shipments, and they keep many solicitors in the field to visit local elevator companies. In the early days of the trade, they resorted to all sorts of practices in order to obtain shipments and they frequently underbid each other with regard to the rates of commission charged. This was sometimes accomplished by granting secret rebates to elevator managers, or by granting favors and privileges which had the effect of cash rebates. Such practices tended toward a demoralization of the grain trade, and encouraged illegitimate practices, such as manipulation of price returns, etc. For these reasons, it was found necessary to adopt uniform commission rates, and to pass stringent rules to prevent any departure from them. There can be no doubt but that the commission rule is both necessary and just and that it has had a beneficial effect on all who are engaged in the grain trade, including the farmers themselves. Much the same considerations apply to the live-stock trade.

Enforcement of Commission Rule. — In order to enforce the commission rates established by grain and live-

stock exchanges, stringent rules provide penalties for any departure therefrom. The rules of the Minneapolis Chamber of Commerce, which are typical, are in part as follows: "Every member of the Association, and every person, firm and corporation . . . who shall charge less than the regular rates of commission established by the rules of the Association; or shall assume, or rebate, any portion of the same; or shall, with intent to evade in any way directly or indirectly, the regular rates of commission . . . , purchase or offer to purchase, any grain or seed . . . consigned for sale; . . . or shall, with intent to cut or evade . . . make use of any shift or device whatsoever, shall be deemed guilty of violating the rules of the Association establishing rates of commission, and, on conviction thereof, shall be fined by the Association not less than $250 nor more than $1000 as the Board of Directors may determine. . . ." The rules also provide that the Board of Directors shall offer a reward not exceeding $1000 to any person who shall furnish evidence that results in the conviction of any member of the Chamber for violation in any way of the commission rule.

The carrying out of the intent of the commission rule also leads to other restrictions on the part of grain exchanges which are sometimes criticized. For example, it is apparent that a commission man might get around the commission rule by buying grain outright on track in the country at such a price as would yield him a gross profit less than the commission he would receive if he handled the grain on a consignment basis. Consequently the Minneapolis Chamber rules that track bids on grain in

the country *for shipment to Minneapolis* must be based on Minneapolis values, and that all charges, including the regular commission, must be subtracted in arriving at such bid. If the commission rule is just and necessary, as it appears to be, some such provision is also essential. It does not affect the bids or purchases on track for shipment to any other market, and consequently does not narrow the market for grain in territory tributary to the exchange that adopts such rules.

Commission Men as Buyers. — Although commission men usually act as agents for sellers or shippers they sometimes act in the capacity of agents for buyers. Dealers who make a specialty of this service are often called "brokers," but they are frequently the same dealers who receive goods on consignment, especially in the important grain and live-stock trades, and it is in connection with their dual capacity as agents for both buyers and sellers that interesting problems arise. Flour mills in Minnesota outside of Minneapolis originally relied largely on local supplies for their raw material. As mixed farming has developed, and as mills near Minneapolis have increased their capacity, they have come to rely more and more on the receipts of wheat at the great primary market. They do not use enough wheat to make it worth while to maintain buyers on the floor of the Chamber of Commerce as the large Minneapolis mills do, and consequently they give their orders to commission men in the Chamber to make purchases for them. Some of them hold memberships in the Chamber in order to profit by the lower commissions charged members, alluded to above.

Similarly in the live-stock trade, many of the cattle arriving in the great primary markets are thin and scrawny and not fit for slaughtering. It is customary for farmers to buy these "feeders" and "stockers," as they are called, take them to their farms for several months to feed and fatten them, and then to resell them, making a profit out of the transaction. In making their purchases of "feeders" farmers have the privilege of journeying to the live-stock markets and selecting the animals themselves, but they usually find that it pays to take a commission man along with them to make the purchases, both because the commission man is a better judge of stock, and because he knows market values better and can usually save the farmer more in price than the amount of commission charged for the service. A further development of this custom has been for the farmer to stay on his farm and simply send his order to a commission man to buy a carload of feeders for him. The live-stock exchanges establish uniform commissions to be charged for this service, just as in the grain trade.

A commission man who does both a consignment business and an order business for outside buyers is theoretically (and legally) supposed to sell his consignments and make his purchases independently. It sometimes happens, however, that the commission man uses his own consignments in filling orders from outside, thereby acting as agent for both buyer and seller with respect to the identical goods, and also charging a double commission — one to the seller and one to the buyer. In extenuation of the dealers who do this, it may be said that they ordinarily do not make a common practice of it; that

their competition for consignments leads them to return to the shipper the highest possible price obtainable; that by making returns at this highest possible price, they can still often save their order buyers something; that they frequently find more suitable goods in their own consignments than they find in the hands of other dealers; and that they get the two commissions anyway, when they sell consigned goods and purchase goods on order separately. When the practice is carried out with integrity and honesty to all concerned, there is really nothing reprehensible about it because both buyer and seller may be benefited, but there is so great an opportunity for fraud and sharp practices, to say nothing of its illegality under the common law, that it should be prohibited altogether.

The same thing may be accomplished by a commission dealer selling through a subsidiary or allied company. It is said that certain wholesale produce firms in Chicago are affiliated with each other financially and that they often sell to each other in such a way as to result in injustice to shippers and to other produce dealers. In the grain trade there are interrelations between different companies; some are subsidiary companies of others; others are affiliated in the sense that the stock is owned by the same individuals. These allied companies often sell consigned grain to each other and sometimes buy from each other to fill orders from outside buyers. In Minneapolis, owing to the airing of this practice during a legislative investigation of the grain trade in 1913, the Chamber of Commerce passed a resolution prohibiting further sale by one company to a subsidiary, and this

resolution was followed by an order to the same effect issued by the State Railroad and Warehouse Commission. This put an end to dealings between one company and another that is technically a subsidiary, but does not prevent transactions between companies that are affiliated through common stock ownership. No unsatisfactory results are traceable to this practice, however, other than that it furnishes an opportunity for favoritism and sharp practices, and causes more or less suspicion among shippers, especially those that are obsessed with the idea that all grain exchanges are burdensome monopolies and that their members are crooks.

Conclusions with Regard to Commission Men and Wholesalers. — It has been necessary to consider commission men and wholesalers together because the one class has been gradually merging into the other in many trades, and because the same dealer often acts in both capacities. Just as soon as the commission man begins to guarantee prices, or to buy outright on a delivered, f.o.b., or track basis, he becomes a wholesaler, and in most trades such a transition marks an improvement in marketing methods. The transition, however, has been attended by certain evils, especially through the dual capacity in which so many dealers act. Some of the most important problems of wholesale marketing are those concerning the commission men as such. Nothing has been said of the general dishonest practices that commission men are sometimes guilty of: the deliberate falsifying of returns; the reporting of cars out of condition; fictitious sales to accomplices; the giving out of false market information, etc. Although innumerable

instances of such cases might be cited, we must not go too far in condemning the commission trade as a whole. In general, it is composed of honest and upright men, who perform their functions with a high degree of efficiency, and often under trying conditions. The fact that the commission business necessarily has to be conducted at a distance from shipping point, and therefore without surveillance of shippers, naturally tends to encourage unscrupulous men to enter the trade, and the whole class suffers from the evil doings of these interlopers. Such men have largely been cleaned out of the old-established trades where the dealers are well organized, especially in the older cities where methods have become more highly standardized, but there still remain certain firms in practically all cities and trades, who, if not downright dishonest, stoop to certain sharp practices and to the occasional taking of unfair advantages, so that a certain amount of suspicion attaches to this class of dealers as a whole. This largely explains the agitation which began to develop about 1913 for state laws regulating the handling of farm products on commission. In order not to interrupt the consideration of the different classes of wholesale middlemen with too wide a digression, this matter of legislation affecting commission men will be deferred to another place.[1]

[1] See Chapter XXII.

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CHAPTER VI

MIDDLEMEN OF THE WHOLESALE PRODUCE TRADE — CONTINUED

The Broker. — The broker takes a variety of forms. In general, he is a middleman who either buys or sells on order from another party for a stipulated amount, — usually a flat rate per package or per car, — and hence assumes no risk of price fluctuation or deterioration in quality. He usually represents a buyer or seller in some market other than — and often far distant from — the one in which he is located. For example, a shipper in Florida sends a carload of tomatoes to Chicago. He may not know which are the best firms in Chicago to handle this car, or even if he does know about the various firms, he has no way of knowing which firm or firms will be in the market for tomatoes on the day of his car's arrival in Chicago. It would take too long and involve too much expense to communicate by wire with the different firms to get their bids, — and hence he turns the car over to a reliable broker who knows conditions, and whose duty it is to get the highest price possible. As a rule the broker performs this service with honesty and expert ability, and it is only through showing satisfactory results that he can get distant shippers to trust him and to give him their business.

From the foregoing description of the broker, it appears that he performs functions very similar to those of the commission man. The distinction between the two may be brought out more clearly as follows: Legally, a broker is one whose occupation is merely to bring parties together, or to bargain for them in matters of trade. Ordinarily he acts not in his own name, but in that of his employer. He has no implied authority to receive payment for his principal. Neither, as a rule, does he have actual possession of the property that he is empowered to sell (or to buy). The commission man (or factor), on the other hand, is an agent who makes a business of selling goods consigned to him, or that are put *into his possession*. He has the right to sell goods in his own name (unless forbidden to do so by his principal) and he collects the money from the purchasers.

Large individual shippers or associations of shippers who ship goods to various markets often select a broker in each city, with whom a contract is made giving exclusive agency to such broker for a season at a time. Such agreements usually provide that the broker shall sell the goods at the highest possible price, and that he shall not buy any of the goods himself to hold for speculative purposes. The compensation of the broker is also fixed in the contract, generally a flat rate per package or carload, but sometimes a percentage of gross sales.

The brokerage charges vary with the perishability and difficulty of handling the various commodities, and also to some extent with the season of the year. For example, the brokerage for handling potatoes may be $5 or $6 per car during the fall and winter when the movement is

heavy, and $10 a car for the rest of the year. On perishables, like pears, plums, and the like, the charge is frequently $15 a car, and on cantaloupes, $20 per car. Grapes, watermelons, bananas, sweet potatoes, onions are commonly handled for $10 a car. On oranges and lemons, the charge is frequently 5 cents per box. Nuts are usually handled for from 1½ to 2½ per cent of gross sales.

The broker has a very low overhead expense; since he does not take possession of the goods, he needs no warehouse, and a small office with low rent is usually his place of business. He has to invest very little capital. He usually attends to the selling himself and thus employs no salesmen, although he sometimes needs a clerk or stenographers. One of his heaviest expenses is for telegraph and telephone. The low expenses make possible the small amounts that he charges for his services. His main function is to bring country shipper and jobber together, *i.e.* the broker usually sells around the wholesale receiver or commission firm direct to the jobber — although he sometimes also sells to the wholesale receiver. Sometimes he breaks up a car into two or more parts in selling to jobbers.

Then again, the broker may occupy a position between the receiver or commission house and the jobber in the same market. This is common in the case of such commodities as potatoes, watermelons, and cabbages, which are shipped in bulk rather than in packages, and which may vary considerably in quality. The commission man who handles various commodities receives an unusually large number of cars of potatoes on consignment on a

given day. He has three courses open to him for finding an outlet for these large receipts: he may use his regular salesmen, who have fairly uniform duties to perform each day, and who therefore might have to sacrifice other work in order to handle these potatoes efficiently; or he may augment his selling force temporarily during the potato rush; or he may call on a broker who is an expert potato man. The last method is likely to be the cheapest and yield the best results to the shipper. In other words the wholesaler makes use of the services of an expert potato salesman to sell to jobbers located in the same city — an excellent example of the addition of another middleman with resulting efficiency and economy in marketing. The brokerage in this case is usually smaller than when the broker represents a country shipper. For potatoes, for example, it is commonly five dollars per car.

The two types of brokers described above are common in the general produce trade; brokers are found in other more specialized trades, as in the butter and egg trade. In Chicago, for example, which is the largest distributing point for butter in the United States, there are brokers who handle butter in car lots at one fourth of a cent a pound. Brokers may represent buyers rather than sellers. For example, a New York butter house, or a Boston chain-store company, may want a carload of storage butter in Chicago, and the order may be placed through a broker who is familiar with the needs of the buyer and who is in much better position to locate the quality desired than is the eastern buyer. Then again there are brokers in eastern markets who handle flour

and feed for Minneapolis millers or shippers. An exporting firm in Kansas City may sell a cargo of wheat for shipment to Antwerp via Galveston through a wheat broker in New York. The duties of brokers vary somewhat in the different trades, but in general it may be said that they act as expert salesmen (or buyers) of goods in large lots, and usually for principals in distant markets. The pure brokerage business does not involve the advancement of money or the outright purchase of goods, although there are some dealers who have gradually taken over these functions but who are still called brokers.

In some cases, the broker has developed into a " shipper's representative," *i.e.* a man who is employed exclusively by a large shipper to attend to his affairs. The California Fruit Growers' Exchange, for example, sells through brokers in smaller markets where the business of the association is not sufficient to take the whole time of a man; but in the larger cities, both where the company uses the auction sales, and where it resorts to private sale, it has its own representatives, whom it pays for their whole time.

The General Consignee. — Although not particularly important from the standpoint of volume of business handled, there is an interesting middleman, often called a " general consignee." He stands between the individual shipper in the country and the commission man in the large cities (especially Chicago). His principal reason for existence is that he consolidates the small shipments of individual growers into car lots thus obtaining for the shippers the benefit of lower freight rates. He solicits

his business largely in those sections where highly perishable fruits and vegetables are raised, sending his agents from one section to another as the various crops ripen. When there is an established local buyer or a shipping association, there is little need of the general consignee, although he performs other functions than the consolidation of individual shipments into car lots. The general consignee does not become the owner of the goods, neither does he sell them; he turns them over to the various commission men designated by the individual shippers themselves. But he checks out the various consignments, sees that they are in proper condition, and attends to claims against the railroad company. He gets his compensation for services rendered by buying transportation at carload rates and selling it to the shippers at a slight advance, but below the less-than-carload rates. The shipper not only saves in the freight rate, but has a representative who sees that his goods are properly cared for on arrival at market.

An illustration of the benefits derived from the functions of the general consignee is offered by recent experiences in the truck-growing region near New Orleans.[1] The hundreds of small farmers in that section formerly shipped their lettuce, radishes, cauliflower, etc., in barrels, packed in ice, to Chicago by express. Each grower shipped individually, and oftentimes only a barrel or two every few days; express rates were high, and the net returns were often meager. About 1910, the general consignee with headquarters in Chicago,

[1] Collins, J. H., Shipping to a General Consignee, *The Country Gentleman*, March 13, 1915.

made his appearance in New Orleans, where he sought to combine the small contributions of individual growers into car lots. The business has grown rapidly, the traffic handled by one firm having increased from ninety-five cars to over six hundred cars in four years. The growers send their small allotments to New Orleans by boat, by wagon, by local freight, or by express, and the general consignee loads them into refrigerator cars and ships them to Chicago or other markets by fast freight. The growers have benefited not only by lower transportation rates, but also by better service.

The Jobber. — As already explained, the jobber is a dealer who buys in wholesale quantities from the commission man or wholesale receiver and sells in small lots to retail stores or other retail outlets. There are always many more jobbers than there are first-hand receivers in any trade; usually they congregate in the same general district as the wholesale receivers, but in the larger cities, it is principally the jobbers who form the secondary wholesale centers. The jobbers study the various retail outlets, and often specialize on some one class of trade, as high-class grocery stores, or ordinary grocery stores, or delicatessens, or hotels, etc., and jobbers very frequently confine their operations to certain parts of the city.

Sometimes a jobber tries to go around the wholesale receiver and buy direct from the country shipper. But it must be remembered that the jobber builds up a fairly definite trade with retail stores, so that the quantity of goods that he can handle remains fairly constant from week to week, whereas the shipments of any commodity

from the country always fluctuate in quantity to such an extent that the jobber would have either too much or too little to satisfy his definite trade channels were he to receive direct from the country.

Furthermore, the jobber in building up his trade gets to know just what quality his class of trade demands, and unless he can always give the same quality, he loses his trade. In getting goods from the country, he cannot be sure of uniform quality. He generally wants to see what he is buying — to actually inspect it — and hence he finds that he must rely on the big wholesale receiver who gets large quantities of goods of all descriptions from various parts of the country. These two reasons — fluctuating quantities and fluctuating qualities — go far to explain the need of having a set of jobbers, and also of the functions that jobbers perform.

But this is not all; jobbers usually perform the delivery of goods to retail stores, and require expensive equipment for so doing. They deliver in exceedingly small units (when the total volume of goods arriving in a large city is considered) and with great regularity and frequency. They also develop special lines of trade, such as special packages for different retailers, helping each retailer to attain a certain individuality in the goods he offers for sale. They also encounter the great difficulty of making collections from retail stores, which alone is a considerable item under present merchandising conditions. Since the average jobber does a smaller volume of business than the average wholesaler, and since he performs such a variety of functions, including delivery to retail stores, the margin taken out by the

jobber is usually higher than that taken by the commission man or wholesaler.

Shippers. — Somewhat analogous to brokers, at least in their capacity of buyers on order from outside markets, are "shippers." By shippers is meant that class of traders who specialize in buying goods in one market for shipment to another. There are some instances where brokers have been gradually merging into shippers. For example, in the butter and egg trade in Chicago, there is an important class of dealers commonly called brokers. Formerly they were brokers, pure and simple, *i.e.* they did not buy outright, and performed only the function of bringing distant buyers and sellers of car lots together. Gradually they have assumed other functions: they buy goods outright and thus assume the risk of price fluctuations; and they finance shippers by allowing them to draw drafts on them the day of shipment. Most of these traders have regular customers in eastern interior and southern markets, and send out price cards to these dealers. In so far as they actually buy butter and eggs to ship to these outside dealers, they are shippers rather than brokers.

Much "shipping" is done by others than those who make this their sole function. As already explained, the wholesale produce dealers of all the large cities sell a considerable amount — often a very large amount — to jobbers and retailers in smaller cities and towns. Thus the large New York butter and egg receivers supply jobbers in New Jersey, northeastern Pennsylvania, southern New York, and southern New England. The wholesale dealers of Minneapolis and St. Paul supply retail stores with fruit

and vegetables throughout Minnesota and the Dakotas. The large receivers of Chicago do an immense shipping business with smaller cities of the Middle West, and usually such a shipping business is carried on by a separate department. This branch of the business is more expensive to handle than the local trade. Jobbers in the smaller cities frequently ask for rebates from the agreed price on account of deterioration of goods in transit. While it costs the Chicago wholesale fruit and vegetable dealers from 6 to 7 per cent to do their local business, they claim that their out-of-town business costs them over 10 per cent. Sometimes large city wholesalers have branch distributing houses throughout their trade territory so that they may the more easily supply the cities and towns far distant from their principal offices. This is true of certain Minneapolis and St. Paul houses for distribution in the Northwest.

Shippers of Barley and Oats. — Shippers occupy an important position in the grain trade. Out of 524 active members of the Minneapolis Chamber of Commerce in 1914, there were thirty-one who made shipping to other markets their principal business. Since Minneapolis is a large consumptive market for wheat and flax seed, the shippers handle principally the coarse grains, especially barley and oats. The manner in which the barley trade is handled is interesting and unique. Little attention is paid to state grades on barley, because this grain does not lend itself to standardization so completely as do wheat and corn. The various consumers of barley have their individual preferences with regard to the color and condition of barley that they buy, and

therefore different buyers often bid different prices on the same sample. Consequently a number of large shippers have adopted their own private standards. These firms have their distributing agents in eastern cities — either their own men, or brokers who handle their business season after season — and through these outlets regular customers have been obtained. Knowing the needs of these customers, the shippers in Minneapolis at the beginning of each crop season establish certain "types" of barley, which by careful buying and skillful blending they maintain throughout the season. Eastern agents and large customers are supplied with samples of these types, on which they may base their orders with reasonable assurance of obtaining just what they order. This system saves the eastern buyers the expense of maintaining their own buyers in Minneapolis (the largest primary barley market in the country). It also represents a very high development of the shipping business, because it not only requires a high degree of skill in buying, but also a large amount of capital tied up in grain and in terminal elevators. There is also more risk in handling barley than in handling other grains, because barley cannot be hedged in the future market.[1]

Oats are handled to a certain extent in the same manner as barley, although since this grain is more susceptible of standardization, and since there are not so many individual preferences and idiosyncrasies on the part of buyers, large quantities of this grain are sold to eastern buyers on the basis of Minnesota state grades. Yet some

[1] See Chapter XVI.

of the large shippers establish certain types which are given trade names and which are advertised through brokers among the eastern buyers.

Exporters. — Exporters may be called shippers who buy for exportation to foreign countries, and since this branch of marketing involves a very high degree of skill, great risk, and large capital investment, it is carried on by a special class of traders in the commodities that are exported in large quantities, such as cotton and wheat. Exporters have to know not only all the intricacies of the domestic markets, but they must keep in close touch with foreign markets, and be familiar with such matters as ocean freight rates, marine insurance, and foreign exchange. Furthermore, they must be of unquestioned honesty, or else foreign houses will have no dealings with them. The following description of the export business in Kansas wheat gives an idea of how this business is handled.

The export business[1] in Kansas wheat is handled principally by Kansas City and Chicago houses, although a large quantity is also handled by eastern (principally New York) houses. In general there are three classes of dealers who are engaged in the movement of wheat from Kansas stations to foreign ports. The first includes those who carry it only to the Gulf (Galveston, Port Arthur, or New Orleans). The second includes those who take it at the Gulf and sell it delivered in foreign countries. This class is represented by New York exporters. The third consists of those who buy

[1] Kerr and Weld, Prices of Wheat to Producers in Kansas, etc., House Document 1271, 63d Congress, 3d Session, p. 23 *et seq.*

wheat in the country or on the Kansas City Board of Trade, and sell it on terms which call for delivery at foreign ports. This third class also buys some wheat "delivered" at the Gulf or f.o.b. vessel.

There are many small firms that buy wheat in the country for delivery at Gulf ports. These are located not only in Kansas City but also at such points as Wichita and Hutchinson. "Delivered at the Gulf" means merely "on track" at a Gulf port, and the charges up to this point consist of the freight rate from the country station and weighing and inspection fees on arrival at the Gulf. To load wheat from the car into the hold of a vessel, it must be taken into an elevator and often stored until loading time. There is then a loading charge of three fourths of a cent and other incidental expenses, amounting to a total of from 1 to 1½ cents. To undertake these last-named operations is termed "fobbing," which means placing the wheat f.o.b. vessel. Most of the smaller houses who buy from the country "delivered Gulf" sell their grain "on track" to the larger exporters and do no "fobbing," while some undertake this function and sell to the larger firms f.o.b. steamer.

During the "fobbing" operation grain is mixed in the Gulf elevators and the smaller firms often employ a forwarding agent at the Gulf port to attend to this matter, while the larger houses maintain men at the Gulf ports to look after this mixing. The large houses which buy direct from country points and carry the grain through to foreign ports necessarily do their own "fobbing," which they must take into consideration in the price they charge the foreign buyer.

Practically all grain sold to foreign importers is sold on a basis of delivery at foreign port. That is, an exporting house must charge the Liverpool buyer a high enough price to allow him to pay the ocean freight, insurance, and other incidental charges, and have something left for profit. When an exporter sells in this way, he is said to sell "c.i.f.," *i.e.* cost, insurance, and freight included. When a shipper sells to an exporter either "delivered" or f.o.b., he usually has to pay a brokerage of one eighth of a cent to a broker who has consummated the sale for him. It occasionally happens that a Kansas City house places such a sale through a New York broker only to find that he has sold it to another Kansas City house, which is selling the grain "c.i.f."

There are great risks incurred by those houses that sell c.i.f. In the first place, a Kansas City house, for example, has a certain amount of grain at the Gulf which it wishes to sell to a Liverpool importer. This grain is necessarily hedged in the future market. An offer is cabled the Liverpool house. The Liverpool market is in operation while it is night in Kansas City. The next morning the Liverpool house wires an acceptance. The Kansas City house must buy in its hedge. If the market is "off" at the opening, the Kansas City house may make more than it anticipated. But the Liverpool house knows more about world market conditions than the American exporter during the night, and is in a better position to know what effect the "cables" will have on the opening of the American market. The Kansas City house must allow for this possible fluctuation in the future market when it makes its offer.

Another risk connected with the export business is the fluctuation of ocean freight rates as well as the difficulty of always having enough ocean space contracted for or being able to use all that is contracted for. Ocean freights are not so stable as railroad rates. If there is a dearth of vessels at a given port, the rate goes up; if there are a number of vessels that cannot get full cargoes, the rate is cut.

A third risk is in the fluctuation of the price of foreign exchange. The exporter sells in terms of English money delivered at Liverpool. If the price of foreign exchange varies between the time of sale and the selling of the bill of exchange, the exporter has either an unforeseen loss or gain.

In spite of these risks and the fact that the export business requires the tying up of a large amount of capital, the business is done on astonishingly small margins. The gross margin allowed by the exporter in making his bids usually runs from 2½ to 3 cents. Out of this must be paid the overhead expenses of the firm, such as office expenses, cablegrams, interest, etc., amounting in all to about 1 cent a bushel, and leaving a net profit of from 1½ to 2 cents a bushel. Sometimes this net profit is attained; sometimes it is greater; sometimes it is smaller. The following statement shows in detail eight actual transactions of a large exporting house during July, 1914, before the European war began. In each case the wheat was bought "delivered" at Gulf, and sold "delivered" Liverpool, and the expenses were the f.o.b. charges at Gulf port, ocean freight, and insurance and incidental charges. The f.o.b. charge of 1 cent is

figured low, and most exporters consider it to be from $1\frac{1}{4}$ to $1\frac{1}{2}$ cents. It is impossible to figure it exactly, because it involves some interest charges. The insurance and incidental charges are also figured lower than most houses, and include only marine insurance, whereas all shipments to the Continent and some to the United Kingdom carry an additional "insurance on outturn," meaning an insurance which guarantees or protects the delivery of the full amount that the American exporter contracts to deliver at the wharf in the foreign port.

DETAILED STATEMENT OF EIGHT SPECIFIC TRANSACTIONS OF WHEAT BOUGHT "DELIVERED GULF" AND SOLD "DELIVERED LIVERPOOL"

	Date of Sale	Grade of Wheat	Month of Shipment	Bushels	Price Delivered Liverpool	Price Delivered Galveston	Total Margin	Costs				Gross Profit, Exporter	Approximate Overhead Expense	Approximate Net Profit to Exporter
								Ocean Freight	Insurance, Etc.	F. O. B. Charges	Total			
	1914				*Cents*	*Cents*	*Cents*	*Cts.*	*Oct.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
1	July 9	No. 2 hard	July	40,000	92.75	83.00	9.75	6.0	0.5	1.00	7.5	$2\frac{1}{4}$	1.00	$1\frac{1}{8}$
2	July 11	do	do	40,000	92.60	81.75	10.95	6.0	0.5	1.00	7.5	$3\frac{1}{4}$	1.00	$2\frac{1}{8}$
3	July 13	do	do	40,000	91.60	$80\frac{7}{8}$	10.75	6.0	0 5	1.00	7.5	$3\frac{1}{4}$	1.00	$2\frac{1}{4}$
4	July 14	do	do	40,000	90.85	$80\frac{7}{8}$	10.00	6.0	0.5	1.00	7.5	$2\frac{1}{2}$	1.00	$1\frac{1}{2}$
5	July 21	do	Sept.	24,000	94.65	$84\frac{5}{8}$	10.00	7.5	0.5	1.00	9.0	1	1.00	0
6	do	do	Oct.	24,000	95.10	$84\frac{5}{8}$	10.50	7.5	0.5	1.00	9.0	$1\frac{1}{2}$	1.00	$-\frac{1}{2}$
7	July 15	do	July	40,000	91.65	81.50	10.15	6.0	0.5	1.00	7.5	2.65	1.00	1.65
8	July 25	do	Oct.	24,000	98.70	88.50	10.20	7.5	0.5	1.00	9.0	1.20	1.00	0.20

Scalpers. — Scalpers or speculators are men who make a business of buying goods from wholesale dealers with the hope of reselling to other dealers at a profit, usually in the same market. Ordinarily they do not carry the commodity any farther along in the marketing process,

because they either sell to one of the same class of dealers from whom they bought, or at least to another dealer in the same market who might have procured the commodity from the original seller at the same price paid by the scalper. For this reason, there are many people who say that the scalper is unnecessary, and that his presence adds to the cost of marketing, especially in the grain and livestock trades, where he is most commonly found.

The scalper performs his principal function through the influence that he exerts on prices in the market in which he operates. If the price sags the least bit below what the scalpers believe market conditions warrant, they begin to buy, and thus maintain the price. In the Minneapolis Chamber of Commerce, for example, the bulk of the wheat is bought by a small number of large flour millers, and by the terminal elevators. During some seasons of the year the elevators may be buying very little, and the big milling companies are the principal buyers. It would appear that the buyers of these companies might be able to depress the price by merely holding back in making their purchases, but if they did so, the scalpers would immediately jump in and furnish sufficient demand to keep the price up. They know that the millers have to buy large quantities of wheat every day, and that they will have to pay the price to get it. The possibility of shipping their purchases to other markets in case local conditions should prove unfavorable is another influence which keeps the markets in line and prevents an unnatural depression of price in a single market by large operations.

In the organized market places where the scalper does

his work, it is found that he is content with extremely small margins of profit, and that very often he handles goods either at no profit at all, or at a loss. In making a study of the scalping operations in the Minneapolis Chamber of Commerce, the writer was permitted to examine the books of three scalpers, and data were obtained on eighty-five cars of grain. The following statement shows the number of cars resold at various profits and losses:

		Number of Cars
Resold at same price		11
Gains per bushel:		
Less than 1 cent	19	
1 cent but less than 2 cents	27	
2 cents but less than 3 cents	7	
3 cents but less than 4 cents	1	
4 cents but less than 5 cents	2	
Total on which gains were made		56
Losses per bushel:		
Less than 1 cent	4	
1 cent but less than 2 cents	6	
2 cents but less than 3 cents	6	
3 cents but less than 4 cents	1	
4 cents but less than 5 cents	0	
5 cents but less than 6 cents	1	
Total on which losses were taken		18
Total number of cars		85

A rough average of the gains and losses on these eighty-five cars is about two thirds of a cent per bushel per car profit, and although the total number of cases investigated was comparatively small, the indications were that this figure represented fairly closely the average profit from scalping operations at least on the crop of 1913. It will be seen from the table above that gains

were made on nearly two thirds of the cars scalped, and that the other one third were resold either at a loss, or at the same price originally paid by the scalper.

At the same time these data were gathered, a study was also made of the directness with which grain passes through the hands of dealers in the Chamber of Commerce to the final users or terminal elevator companies. It was found that out of 400 cars that were traced through the books of the commission men, only eleven, or 2.8 per cent, went into the hands of scalpers. When the grain crops are of high and uniform quality, there is not so much opportunity for scalpers, and this was true of the crops of 1913, which were being marketed when this study was made. In years when there is much poor and damp grain, the proportion of scalped cars runs up to perhaps 4 or 5 per cent, but even so, the profits taken by the scalpers are so small, and they perform such a useful function in steadying and holding up the price, as well as by inciting the commission men to use their best salesmanship in selling their consignments, that on the whole they are a benefit rather than a detriment to the marketing system.

There are also "future scalpers" in the speculative markets. They are dealers who buy and sell for future delivery as pure speculations, without any idea of taking or delivering actual commodities. It is their presence which does much to make possible the continuous market offered by the grain and cotton exchanges, *i.e.* the opportunity to buy or sell at any moment during trading hours. These scalpers carry on their business in a most conservative manner, taking their profits and losses in

extremely small doses, and rarely going either " long " or " short " even overnight.

Except for auction companies and cold-storage companies, which will be considered in the next two chapters, the principal kinds of wholesale middlemen have now been described. It should be remembered, however, that the functions attributed to these various classes of specialists are often performed by a single firm, and that the lines of demarcation are not clear. The same firm, especially in smaller cities, may combine the functions of commission man, wholesaler, jobber, and shipper, and yet if it does business on a large scale, it is apt to be organized into departments, each department performing a definite set of functions. Furthermore, there are often found certain middlemen in the largest markets who perform very special and unusual functions due to certain peculiarities of the trades in which they appear. With some exceptions, it is safe to say that the tendency during the past twenty years has been toward a greater degree of functional specialization, and in spite of popular opinion to the contrary, it is also safe to say that as a rule such specialization cannot develop unless it results in greater economy or efficiency in the marketing process.[1]

[1] Cf. the first part of Chapter IX, especially on the relation between cost of marketing and number of middlemen.

CHAPTER VII

SALE BY AUCTION

MANY students of the marketing problem have urged that one way of reducing the cost of marketing is to make it possible to sell all farm products at auction in the large wholesale markets. The New York law of 1914 establishing a Department of Foods and Markets gives the department power to establish auction markets in such cities of the state as it deems advisable.[1] It is provided that goods consigned to such markets may be sold at public sale by a licensed auctioneer. Such auctioneer is to be appointed by the department and he must furnish a fidelity bond with satisfactory sureties for not less than $1000 or more than $3000. The department is also to fix the commission rates to be charged by the auctioneer, in addition to which there is to be a commission of 3 per cent of the gross selling price which shall be paid into the state treasury and applied to the support of the Department of Foods and Markets.

Likewise the Mayor's Market Commission of New York City recommended, in addition to public wholesale terminal markets, "that sales at auction be made permissive in the several public markets," and that "they should be conducted by bonded auctioneers,

[1] See Chapter XXI for additional information about this law.

licensed by the city to whom goods could be consigned by persons who desired to sell their goods at auction." This commission went on to say: "It must not be supposed that a very large percentage of the goods coming to the market would be sold in this way, because many shippers would prefer to do business through private dealers, but the fact that such sales could be made would tend to steady prices; such auction sales would also serve to fix the market prices for each day."[1]

Another instance of the belief that the auction method is an important remedy for present marketing conditions is to be found in an enterprise under way to establish a market place midway between Minneapolis and St. Paul to which farmers may consign their products for sale by auction, and where retail merchants and individual consumers are expected to attend the sales. It is also planned to erect a cold-storage plant to hold commodities for which sales are not readily found. A private corporation is promoting this scheme and it has solicitors in the field who are trying to sell stock both to city consumers and to farmers, and who are promising a reduction in the cost of living as soon as the company begins operation.

It is safe to say that recommendations to establish auction markets for general farm produce have been made without any adequate study of the auction method as applied to agricultural products. The principal questions that arise in connection with this problem are as follows: What farm products are now sold at auction?

[1] Report of the Mayor's Market Commission of New York City, December, 1913, p. 27.

What are the characteristics of a commodity that make it adaptable to sale by auction? What cities have auction markets now? What are the benefits and disadvantages of selling by auction? What charges are made for selling in this way? Who owns the auction companies and how are they operated? What position do existing auction companies occupy in the general scheme of marketing those commodities now sold at auction?

Cities Having Auction Markets. — As will be pointed out below, fruit is the principal commodity sold at auction and even this commodity is sold in this way in only seventeen of our largest cities. Auction companies are found in Boston, New York, Philadelphia, Baltimore, Buffalo, Pittsburgh, Cincinnati, Cleveland, Detroit, Chicago, Minneapolis, St. Paul, St. Louis, Kansas City, New Orleans, Los Angeles, and San Francisco.[1] Boston has two auction companies. One of these has been in existence since 1847 and has an enviable reputation. New York has three which sell fruit, and until recently had one that sold live poultry. The three that sell fruit dispose of about $25,000,000 worth annually, fairly evenly divided among the three. Baltimore has two companies, one of which sells bananas only. Pittsburgh, Detroit, and Chicago have two companies

[1] There may be some other cities in which there are regular sales by auction but these are the only ones that have come to the writer's attention. There is no literature of any value on this subject (at time of writing) and the data for this chapter have been obtained by personal interview and correspondence. The author is particularly indebted to Mr. V. K. McElheny, President of the Fruit Auction Co. of New York City.

apiece and the other cities have one apiece. In Chicago, one company does the bulk of the business. The second companies in Pittsburgh and Detroit were started in 1914 among members of the trades in those cities who were dissatisfied with the methods of the older companies which had been in existence for some years.

Commodities Sold at Auction. — New York City has the largest auction market in the country and the variety of goods handled there is also the greatest. The goods sold at auction in New York are as follows: California citrus fruits and California deciduous fruits (including peaches, pears, grapes, plums, and fresh prunes); Florida citrus fruits; oranges, grape fruit, and pineapples from Cuba; citrus fruits and grapes from foreign countries; French and Italian chestnuts; a few boxed apples and other fruits from the American Northwest; and bananas. Until about 1910 the bulk of Florida citrus fruits were sold by private sale rather than through the auction companies, but since the formation of the Florida Citrus Exchange about 85 per cent has been sold through the auction companies.

California citrus fruits are sold at auction in most of the largest markets of the country. The California Fruit Growers' Exchange, which controls a large part of the supply, uses the auction markets in Boston, New York, Philadelphia, Baltimore, Pittsburgh, Cincinnati, Cleveland, St. Louis, and New Orleans, and also in London, England. In other cities this company sells at private sale, either through its own paid representatives or through brokers. The California Fruit Distributors which controls a large part of the deciduous fruits

shipped from that state generally uses the auction companies. The Porto Rico Fruit Exchange is another shippers' organization that employs this method. Foreign oranges, lemons, and grapes are also sold at auction, both in seaboard markets, which they reach in boatloads, and in interior markets, which they reach in carloads.

Some commodities other than those enumerated above are said to be handled at auction in other cities of the country. Kansas City reports[1] that watermelons and cantaloupes, as well as Spanish onions, are handled; Detroit reports apples in barrels, as well as in boxes, and also domestic onions; Cincinnati reports "vegetables," but the kind of vegetables is not specified.

Only a few of the box apples from the Northwest are sold through the auction companies. The North Pacific Fruit Distributors, which controls about 50 per cent of the tonnage, has been prejudiced against auction sales and has used them only for "crippled" or over-ripe fruit. This is, of course, not a fair trial. The feeling in the Northwest appears to be that the auctions are controlled by certain buyers or commission men, who manipulate prices in their own interests, or who levy charges for handling, in addition to the regular auction commission, in order to make large profits on the stock investments in the auction companies. There is also a feeling in the Yakima Valley district that the growers' organizations should establish more direct channels of trade to retail stores in the East, and that therefore they should not add another middleman in the shape of an auction company but that they should even do their own jobbing

[1] In personal correspondence.

business. These people also believe that when the auction has been used, it has been more or less disastrous to the apple business.

Many auction companies have tried to sell other commodities than those heretofore mentioned. The Philadelphia company at one time announced that it would sell butter and eggs, but none were received by the company. A New York company attempted to sell live and dressed poultry; no dressed poultry was received for sale, but a certain amount of live poultry was handled in this way for several months until the spring of 1915, when the project was abandoned. Attempts have been made in Buffalo to sell Florida celery and Texas tomatoes, but they were not successful, and the manager of the company says that he cannot explain why vegetables cannot be handled successfully. Georgia peaches are sometimes sold at auction. Some of the reasons assigned by managers of auction companies in different parts of the country for their failure to handle other commodities successfully are as follows: "Not honestly packed"; "Not good quality"; "Not offered regularly." For example, one company claims that it failed to handle barrel apples successfully because they were not honestly packed; they had "fancy 'man-sized' apples on top, 'baby-apples,' gnarled and wormy, in the center, and 'lady' medium apples on the bottom."

Characteristics of Goods Sold at Auction. — Three features stand out preëminently as characteristics of commodities successfully sold at auction. These are: (1) Perishability or semi-perishability; (2) a large

and regular daily supply; and (3) standardization of grades and packages.

The principal value of sale by auction is that this method results in the primary distribution of huge quantities of perishables into their respective trade channels in the shortest possible time. Suppose that several carloads of oranges and lemons arrive in a large city on a given day. Each carload contains a great variety of qualities and sizes of fruit, much of which is ready for consumption. Delay means deterioration and waste. In the city there are hundreds of retail stores, hotels, push-cart men, fruit stands, etc., each requiring special sizes and qualities of fruit, and it is necessary that these tons of fruit be broken up into various lots and steered into their final channels as rapidly as possible.

The alternative to auction sale is private sale. Suppose that these several carloads are taken in charge by a number of large wholesale receivers or commission men. The first step would be to get the various sizes and qualities and quantities into the hands of the hundred or two hundred jobbers, who in turn know just what their retail customers want. If private sale is resorted to, wholesalers must interview and show their goods to several different buyers, — and a single buyer to get just what he wants would have to visit several wholesalers. Even *if this did result in finally steering* the fruit into the correct channels at fair prices — which is not at all certain — it would at least consume a large amount of time. Perhaps the process would not be complete for one day's receipts before several more carloads had reached the city.

Thus, it is apparent that the auction sale is an extremely efficient method of breaking up huge quantities of perishable commodities, according to sizes and qualities, of bringing the various buyers together at one place and at one time, and of getting them into the hands of these buyers in the quickest possible manner. It is also claimed that auctions effect a wider distribution of commodities than private sale in that they bring together a larger number of buyers than can otherwise be reached. But comparatively few commodities are so perishable or arrive in such large quantities that it is necessary to dispose of them with so much expedition. Goods like butter and eggs can be held for long periods under refrigeration without appreciable deterioration. Potatoes do not have to be disposed of with extreme rapidity. Perishable fruits have to be sold for what the market will pay on the day of arrival. Oranges and lemons are not particularly perishable, but they arrive in such large quantities in the great markets that speed is necessary in their distribution. Potatoes and other vegetables can usually be held for some time until market conditions are favorable. Furthermore, commodities like butter and eggs move in a steadier flow than perishable fruits and there is more time and opportunity for receivers to develop regular customers so that trade channels have a fair degree of permanence. It is only natural that shippers, and commission men as representatives of shippers, should prefer to find the best possible outlet for their goods by personal canvass and bargaining when this is possible. Consequently it would appear that sale by auction is of special value

for perishable commodities that reach market in large quantities.

But even perishable commodities arriving in large quantities are not adaptable to sale by auction unless they are carefully standardized as to grades and packages. Fruits offered for sale by auction companies cannot all be displayed and inspected. Sale is by sample; a few boxes from each lot are opened and made available for inspection by buyers before the auction sale begins. Unless the packages are uniform in size, and unless the fruit is uniform in quality and size throughout each package, buyers will not risk making their purchases from samples. This accounts for the fact that boxed apples from the Northwest are often sold at auction, whereas eastern barreled apples are not successfully sold in this way.

So important is uniformity of package and contents in auction selling, that many of the leading auction men of the country believe that any commodities that are well standardized in these particulars can and will be sold in this way. This is perhaps one reason why so many students of the marketing problem have advocated the further development of auctions. Very likely, the system can and will be extended in the future to other commodities in our largest markets, but there seems to be very little likelihood that the system will be found practicable for miscellaneous consignments of small lots from scattered farmers.

To be adaptable to sale by auction, there must not only be a supply of commodities sufficient to attract the buyers, but it also appears that the greatest effi-

ciency can be attained when the goods sold at auction constitute a considerable proportion of the total receipts of the commodity in question. Otherwise, a sufficient number of buyers will not be attracted to the auction sales. A large number of buyers, congregated at one place at one time, is absolutely essential to successful auctioning. Although there is a difference of opinion on this point among auction men, some claim that there is apt to be dissatisfaction in any trade where auction sales and private sales compete with each other to too great an extent; and that unless the auction system can dominate the trade by getting the bulk of the commodity and the majority of the buyers, it is not apt to be satisfactory. If this opinion is correct, it furnishes another reason why the public auction for miscellaneous consignments from scattered farmers may not prove effectual.

Since it is necessary for at least a large proportion of the receipts of a commodity in any city to be offered at auction to make the system satisfactory, it follows that this is more easily brought about if the supply of the commodity in question is in the hands of a comparatively few shippers. It will be noticed that the most important commodities sold at auction are controlled by powerful associations of growers, and that there are comparatively few sources of supply. The marketing of California citrus fruits is largely controlled by the California Fruit Growers' Exchange; the deciduous fruits from the same state by the California Fruit Distributors. It has already been mentioned that the Florida Citrus Exchange was responsible for a large increase in the amount of fruit from that state consigned to auction companies.

Likewise, the Porto Rico Fruit Exchange is the main factor in shipping from that island. The bulk of the Cuban shipments are placed on the New York market by a few large wholesale receivers in that city who are direct importers. The great bulk of the goods sold at auction is thus controlled by a small number of large shipping associations, and the extent and success of the auction business in any city depends largely on the pleasure or policy of these few associations. Also in those cities where there are two or more auction companies their relative importance depends largely on their success in obtaining contracts with the largest shipping associations. The California Fruit Growers' Exchange uses but nine of the seventeen auction markets in the country. California deciduous fruits are auctioned in a larger number of cities, principally because such fruits are more perishable than the citrus and require greater speed in their marketing. The North Pacific Fruit Distributors do not use the auctions regularly, but this is not because of a lack of solicitation on the part of the auction men. One other interesting feature with regard to the commodities sold at auction is that they are invariably raised in districts remote from the markets where they are sold in this way, and that attempts to handle near-by products have generally failed. This fact is even more evident in England, where the auction method is used largely for imported products, and not for products raised in England. In the case of products raised near the large markets it is easier for jobbers to establish direct business connections with small shippers; but aside from this fact there is of course no reason why

near-by products should not pass through the auctions, provided they are properly standardized and are marketed in large quantity and with sufficient regularity. When a higher degree of standardization is reached in packing eastern apples, for example, they will probably be adaptable to auction sale.

How Auction Companies Operate. — Auction sales are usually held on some pier or in a railroad freight shed where the commodities reach the city in large volume. When the goods arrive (in boatloads or carloads), they are first separated into lots, varying from three or four to ten or fifteen boxes (of oranges, say) in a lot, each lot containing oranges of the same quality and size. Each lot is numbered, and a catalog is printed, showing the number of each lot, the number of boxes, etc., and these catalogs are given to the buyers. A certain number of boxes in each lot is opened to serve as samples, and before the auction sale begins, the buyers inspect the samples, and mark down in their catalogs the various lots that they desire to purchase. During the auction sale itself, the auctioneer merely announces the number of the lot and asks for bids. The sales themselves are conducted by expert auctioneers and are exceedingly interesting. In the larger markets where immense quantities of fruit often arrive in a single day, the auctioneer must be particularly skillful in obtaining as high prices as possible in a minimum length of time. To accomplish this, he keeps up a continuous talk, not stopping for a moment to wait for bids, but keeping his ear open to catch oral bids and his eye open to catch bids made by means of gestures. Although the outsider visiting the auction

can make out little of the proceedings, the buyers are accustomed to the methods of the auctioneer; they have come to buy and know what they can afford to pay, and they bid spiritedly and without delay. The auctioneer keeps things going at such a high pitch that no time is lost, and as a result, vast quantities of perishable fruits are steered into their various channels in an incredibly short time. Deliveries of fruit to the buyers are often started when the sale is still in progress.

In New York City, although large sales are held on the piers, many are held in a well-appointed building in the wholesale section near the water-front. The samples are brought to this building for inspection before the sales. The three auction companies have their offices in this building and use the same rooms for their sales, but each has its own auctioneers. Under these circumstances, it is considered that the company which has the first opportunity to sell its consignments on any one day has an advantage, and consequently the three companies have adopted a system of rotation, whereby they take turns in opening the sale, from day to day. Likewise, in Boston, two auction companies alternate in having first chance to offer their goods for sale.

In New York there is a special arrangement for handling foreign grapes in order to avoid loss of time. There is a large elevating table or rather there are three such tables side by side, which are loaded with samples on a lower floor and raised by machinery into the auction room where the auctioneer and buyers are assembled. While the grapes on one of the tables are being sold, the other two are lowered and filled and raised again, so

that there is always at least one loaded table in the auction room, and the sale proceeds without interruption until all the grapes are disposed of.

It will be observed that the auction company has other functions to perform than merely conducting the auction sales. It receives and inspects goods on arrival at the wharf or in the freight yards and supervises their division into separate lots; it supervises the opening of sample boxes and prepares them for inspection by buyers; it prints and circulates the catalog; it then conducts the actual sale. After the sale, the company makes remittances to shippers, mails the bill to the buyer, and sees to the collection of this bill. It also supervises the delivery of the goods to the drayman. The usual practice is for the auction company to mail remittance to the shipper within twenty-four hours after the goods are sold, although at least one company is satisfied to make remittance within four days. In two or three auction markets, the buyers are required to pay cash, but usually they are allowed about one week within which to settle. In two or three others, including New York City, the jobbers have from ten to thirty days in which to pay the auction companies, who, however, remit to shippers without delay. All of this work requires a corps of handlers and also an accounting department. The three auction companies in New York economize through a coöperative arrangement whereby they have all the accounting work performed by one force of clerks.

Ordinarily, auction companies do not finance shippers by allowing them to draw draft on day of shipment.

This is done occasionally but at least one company — one with an enviable record and reputation — says that no auction company can succeed if it makes a practice of doing this. Usually such advances are not needed or asked for, because most of the shippers are large and well equipped financially.

The auction company in the fruit trade is an example of an additional middleman who reduces the cost of marketing. Goods are not usually consigned direct by distant shippers to the auction companies themselves, but rather to shippers' representatives (in the case of the associations) or to wholesale receivers or commission men, who turn them over to the auction companies. Some of the companies nominally allow shippers to consign their goods direct, but this practice is discouraged, and most of the eastern companies refuse to handle goods except through a local dealer or representative. They give as reasons first, that they want the shippers to have representatives on hand who can vouch for the faithful performance of duties on the part of the auction company, and second, in order to protect the commission men who turn over business to them. As will be pointed out, however, the auction companies are usually owned by the commission men in the various markets, and they are naturally anxious to protect their own business as receivers. Those who buy at the auction sales are mostly jobbers, although in some cases large retail stores, especially chain-store companies, have their buyers on hand. Sometimes wholesale receivers also buy for redistribution to other jobbers, but more commonly for shipment to dealers in smaller

outside markets. Thus, the auction company is usually an intermediate step between wholesale receiver and jobber, but immensely facilitates the movement of goods from the one to the other as previously explained. In taking over part of the functions which would otherwise be performed by these two classes of dealers it undoubtedly reduces the total cost of distribution, in spite of the fact that the auction company makes a charge for its services.

Selling Charges of Auction Companies. — The auction companies are private corporations conducted for profit and obtain their revenue from commissions charged for selling and in some cases additional charges for unloading, preparing samples, cataloging, etc. The commissions vary in different markets and for different commodities in the same market. The usual range is from 2 to 5 per cent. One company charges 5 per cent for selling goods that are consigned direct, and 2½ per cent for goods turned over by local wholesalers, most of whom are stockholders. Another company reports that its commission charges depend on contracts with shippers and that its lowest charge to large shippers who confine all of their business to the auction company is 2 per cent. Herein lies one of the principal problems to be solved with respect to auction marketing. The preferential rates accorded to large shippers are looked on by members of the trade as "rebates" and there has been much dissatisfaction on this account. Apparently, these rebates are often made secretly and not according to any definite schedule. A flat rate would appear to be more satisfactory, although there may be some justifica-

tion for allowing a preferential rate graduated according to volume of business, provided such rate is open to all. Some companies declined to inform the writer as to the commissions charged. In New York the commission charges run from 2½ to 4 per cent for different commodities, with small handling charges in addition.

Handling charges in addition to the regular commission are levied in but few of the largest cities, and these are usually a flat rate per package rather than a percentage of gross selling price. They are frequently called "terminal charges." In New York, where they take the form of a "catalog" or "dock labor charge" to cover the expense of handling on the pier, preparation of samples, cataloging, etc., they amount to from ½ to 1 per cent of selling price. The Philadelphia company makes such charges only on imported fruits to cover the cost of handling. In Buffalo there is a flat charge of five cents per package in addition to a 3 per cent commission. The New York "catalog charge" is levied against the seller, but the usual terminal charge, as in Chicago, is paid by the buyer. In some markets there is opposition to these terminal charges on the ground that they are unnecessary and that they are merely devices to swell the profits of the stockholders of the auction companies. Herein lies another problem that must be studied more carefully. When an auction company succeeds in obtaining exclusive contracts with a sufficient number of large shippers, such a company has more or less monopoly power and may charge unreasonably high commissions and terminal charges. This matter becomes all the more important when the stockholders in the auction

company are themselves wholesale dealers in the commodities handled through the auction.

Ownership of Auction Companies. — In the majority of cases the stock of the auction companies is owned by wholesalers who deal in the commodities handled by the auction company. Oftentimes these wholesale houses receive goods from outside shippers, to whom they charge a commission. They then turn them over to the auction company, which also charges a commission, and any profit accruing from the auction operations redounds to the commission man as stockholder in the company. Although the commissions charged in the first place are apt to be lower than when goods are disposed of at private sale, there is a question whether there is not sometimes an unnecessary handling with an extra charge levied on the goods. It is further alleged that commission houses manipulate this passage of goods through the auctions by turning them over to each other or to subsidiary companies, before putting them through the auction. Sometimes the bulk of the stock is owned by only three or four of the most powerful commission houses whose high-handed methods have aroused resentment among the members of the trade. It is further alleged that in some of the markets the stock-holding firms are heavy purchasers of products at the auction sales and that they have it in their power to manipulate prices to a certain extent.

It would take considerable careful investigational work to substantiate or disprove these practices, and this is one line of work that must be followed out by students of the marketing problem in the near future. Suffice it

to say that there is a clear advantage in having the stock owned by people outside the trade. This is the case in Boston and New York, in which cities the auction companies enjoy the confidence of shippers to a greater extent than the companies in other cities. The auction company in Baltimore which handles bananas only is owned by people outside the trade. On the other hand, it is probably true that the auction business in the smaller cities would not be sufficiently remunerative to attract outside capital, and that there would be no auctions in those cities if the dealers themselves did not form and operate the companies. It is unfortunate, however, if the controlling interest lies in the hands of a few powerful dealers. When the stock is fairly evenly distributed among a large number of members of the trade there is not so much cause for dissatisfaction in the trade itself, but the effect is not so fortunate on shippers, who are apt to feel that the auction is dominated too much by the trade.

The recent experiences in Pittsburgh and Detroit are illuminating on this point. The principal reason for the organization of new auction companies in both these cities appears to be that a good many traders became dissatisfied because of the fact that the old companies were controlled by a comparatively few concerns who, they believed, used the auctions to their own advantage. In one of these cities, it is alleged that the commission houses that own the auction company neglect consignments from outside shippers and commission men and support the goods which they themselves put through

the auction, thus obtaining better prices for their own goods. In the other city, it is said that the auction company practiced discrimination in the acceptance of goods from consignors who were outside the small ring of owners of the company. In both cities there was dissatisfaction with regard to other high-handed practices on the part of the heavy stockholders of the auction companies, and in forming the new companies an attempt was made to procure as large a number of stockholders as possible.

Conclusions as to Auctions. — On the whole, the auction method is an efficient means of marketing perishable commodities which arrive in large volume and which are well graded and packed. There seems to be little experience which tends to encourage the belief that miscellaneous farm products consigned by scattered individual shippers are likely to be handled successfully in this way. The principal problems to be threshed out with regard to existing companies are those of fairness of commission and handling charges, preferential contracts with rebates to heavy shippers, the ownership of stock, and the use of monopolistic and high-handed methods on the part of a small ring of controlling stockholders. Without attempting to prescribe any particular line of action with regard to these practices, the following extract from a letter from a man who is a heavy shipper, an experienced user of auction markets, and one of the keenest students of fruit marketing in the country, indicates the direction in which the wind is blowing, or at least, the direction in which it may blow in the future. He says: "An auction company should be under

public service regulation if it is to be successful in the smaller places where there is no competition and I believe in the larger places also the rates, rebates, and all other practices should be open to the public and under control of the municipality."

CHAPTER VIII

COLD STORAGE AS A FACTOR IN MARKETING

Economic Value of Refrigeration. — In the marketing of perishables, refrigeration is of prime importance. As soon as butter is manufactured in the creamery, for example, it is put into the " cooler "; it is hauled to the station to be carried to market in a refrigerator car; it is hauled from the car to the refrigerated rooms of the wholesale dealer; it is often held for months in a cold-storage warehouse; it is taken to the retailer who keeps it in his refrigerator until sold to the consumer; and the consumer keeps it in his ice box until it is served on the table. In fact, butter is kept under refrigeration practically all the time; even the short intervals when not under ice during the haulings from creamery to railroad station (if the " local freight " is late) or from refrigerator car to wholesaler (if the terminals are congested), or from retailer to consumer (if the delivery route is long), may result in deterioration when the weather is hot. Modern refrigeration has widened markets, developed agricultural communities, lowered marketing costs, raised prices to producers, lowered prices to consumers, benefited health, and made accessible to the consumer at all seasons a vast variety of delicious fruits and vegetables.

A low temperature may be achieved either by means of ice or by chemical means through the "ammonia process." The latter is commonly called mechanical refrigeration. For small plants, such as the retailers' or consumers' refrigerators, only the ice method is practicable. Most country creameries also use ice, although there is a tendency to adopt the mechanical method. No means of adopting the use of mechanical refrigeration has yet been devised for refrigerator cars, and hence ice has to be used. In the coolers of the wholesale houses in large cities mechanical refrigeration has been coming into general use; in New York City, for example, "cold" is carried through underground pipes from the large cold-storage houses into the various houses in the wholesale district, just as steam heat is often distributed. The large cold-storage plants use mechanical refrigeration altogether; the remarkable efficiency and economy of these plants would be impossible if ice had to be used. In fact, it is the recent development of mechanical refrigeration that has made the modern warehouse possible.

The fact that cold could be artificially produced by chemical action had been known for centuries, but the final development of methods whereby commercial use could be made of this fact was the result of a long series of inventions. It was in 1860 that the ammonia absorption process was invented. It is said that the first cold-storage room in the United States was constructed in New York in 1865 for the purpose of storing fish.[1] The

[1] A brief history of the development of mechanical refrigeration may be found in the Massachusetts Cold Storage Report, pp. 18–22.

ammonia process as now perfected did not come into general use until about 1890, and it is only since that time that cold storage has become of real economic significance in marketing.[1]

Refrigeration is used in two ways: to prevent deterioration in the ordinary passage of goods from producer to consumer; and to hold goods from seasons of surplus production until seasons of scant production. It is in its latter use that cold storage will be discussed in this chapter. Cold-storage houses that specialize in this function are found in all large cities of the country; they are of two classes, public and private. Private houses are those used by the owners for the storage of their own products, such as those operated by the meat packers; public houses are those in which outsiders may store their products on payment of a storage fee. Most of the large houses are public houses, and it is in them that the great bulk of cold-storage products is kept. The owners of the houses do a warehouse business; they do not own the goods stored (except in occasional instances), and have no control over either the prices of the commodities stored or the time of placing in or delivery from storage. Any one may procure storage space in these public houses in any large city, and thousands of dealers, competitors of each other, avail themselves of this opportunity. There is no "cold-storage trust" that buys up farm products and withholds them so as to artificially boost prices. If this is not evident from this description of the very nature of the business, it will be made clear below in the description of the effect of cold

[1] F. G. Urner, quoted by G. K. Holmes in *Annals*, November, 1913, p. 48.

storage on prices. On December 1, 1913, 108 warehouses were storing eggs for 4131 customers.[1]

Commodities Commonly Held in Cold Storage. — Perishable commodities vary in their adaptability to preservation by cold storage, and they may be broadly divided into three classes in this respect.[2] First, those that are so extremely delicate and perishable that they cannot be preserved for any length of time by refrigeration, such as strawberries, peaches, tomatoes, cantaloupes, etc. These articles require refrigeration in transit, but after reaching market they have to be steered through the various trade channels and into consumers' hands in the shortest possible time. It is for these commodities that the cost of marketing is highest. Second, those commodities of a semi-perishable nature, such as certain varieties of apples and pears and citrus fruits, which may be preserved for considerable periods of time in cool temperatures. Third, those commodities, such as butter, eggs, cheese, poultry, fresh meats, and fish that are very perishable when exposed to summer heat, but which may be kept for long periods without serious deterioration or impairment of wholesomeness. The products just enumerated are the principal "cold-storage products," and it is in their marketing that cold storage performs its most signal services. In addition to these perishable commodities commonly held in cold storage there are many usually considered as non-perishable,

[1] Testimony of Frank A. Horne, President, Merchants' Refrigerating Company during hearings on Bill, H. R. 9530, 63d Congress, 1st Session.

[2] See Report of the Mayor's Market Commission of New York City, p. 152.

but which may be injured by insects in the larval state or by the action of bacteria if held in ordinary open-air temperature. Such commodities include nuts, raisins, smoked meats, canned goods, flavoring extracts, and a great variety of other products too numerous to mention.[1]

There are about 1000 cold-storage plants in the United States, representing a capital investment of over $75,000,000, and the value of products annually placed in these houses is estimated at between $500,000,000 and $700,000,000. The following figures indicate the average receipts of some of the most important commodities into cold storage for the two years 1909–10 and 1910–11, and the proportion of the total United States production that was stored:[2]

	Placed in Storage	Per Cent of Production Stored
Beef, fresh, pounds	130,852,000	3.1
Mutton, fresh, pounds	20,169,000	4.1
Pork, fresh, pounds	175,622,000	11.5
Butter, pounds	156,737,000	9.6
Eggs, cases of 30 doz.	9,880,000	15.0

It is estimated that the total value of the commodities enumerated above received into cold storage was about $138,000,000 in 1910.

Temperatures at Which Products Are Held. — Every modern cold-storage warehouse has a large number of separate rooms in which different temperatures are

[1] For a list of over 150 articles often held in cold storage see Holmes in *Annals*, November, 1913, p. 55.

[2] Holmes, Cold Storage Business Features, p. 46.

maintained for the storage of various products. In each room a practically constant temperature is maintained month in and month out, the moisture in the air is regulated as well as the temperature, scrupulous cleanliness is maintained, and elaborate systems of ventilation are provided and goods are piled in such a way that fresh cold air can reach all packages. Some commodities, such as butter, meat, and fish, are frozen hard and maintained in a frozen condition throughout storage, requiring temperatures of from 0° F. or below up to 15° F. Eggs and cheese cannot be frozen and the temperature for them is maintained at or near the freezing point.

Time and Duration of Storage. — Although the principal cold-storage products are produced to a certain extent throughout the year, most of them are produced in much greater quantities at some seasons than at others, and it is naturally during the period of flush production that they are placed in storage. Eggs are produced most heavily in April, May, and June; butter in June, July, and August, — and these are the principal months when the respective commodities are placed in storage. The following table indicates the proportion for each month of the total amount of butter, dressed poultry, eggs, fresh beef, and fresh pork placed in cold storage during the year 1910–11.[1]

From this table it will be seen that 79.4 per cent of the cold-storage eggs were put away in April, May, and June; 80 per cent of the butter in May, June, July, and August; 59.2 per cent of the poultry in November,

[1] Holmes, Cold Storage Business Features, pp. 14 and 15.

December, and January; and 47 per cent of the beef in September, October, and November. Pork goes in with fair uniformity throughout the year. As for poultry, it will be noticed that a large proportion went into storage in August. Although the proportion was unusually large for that month during the year under consideration, it is usual to put "broilers" away in large quantities at that time of year. Unfortunately chickens reach the broiling age only in July and August, and it follows that cold storage has to be used in order that we may have this delicacy during the rest of the year. Roasting chickens go into storage in November and December; and fowls in December and January. Turkeys are also stored largely in December and January.

PER CENT OF TOTAL STORAGE RECEIPTS OF SELECTED COMMODITIES BY MONTHS, 1910–11

	BUTTER	DRESSED POULTRY	EGGS	FRESH BEEF	FRESH PORK
March . . .	—	2.9	6.7	—	—
April	—	2.0	41.9	—	—
May	10.0	1.0	25.0	7.3	7.6
June	31.9	.9	12.5	7.3	9.0
July	26.7	1.5	6.4	9.8	7.6
August . . .	11.4	14.0	1.4	7.6	7.3
September . .	7.5	3.7	2.5	19.3	6.9
October . . .	4.0	7.7	1.1	17.5	6.7
November . .	2.4	20.9	1.1	10.2	8.3
December . .	1.3	28.0	.6	6.0	8.7
January . . .	2.1	10.3	.4	4.7	10.2
February . .	.6	7.1	.4	3.5	10.3
March . . .	1.3	—	—	3.7	8.8
April	.8	—	—	3.1	8.6
	100.0	100.0	100.0	100.0	100.0

The average length of time that products are kept in storage also varies for different commodities. Of the principal products received in storage during the year 1909–10, the average number of months that they were held was as follows: fresh beef, 2.28; fresh mutton, 4.45; fresh pork, 0.88; butter, 4.43; poultry, 2.42; eggs, 5.91.[1]

For some commodities, the average length of time held in storage depends largely on the month when they were put in, — or more properly, when they were produced. This is interestingly illustrated by the intakings and outgoings of eggs during the season of 1909–10. Eggs placed in storage in April, 1909, were carried an average of 7.1 months; in May, 6.14 months; in June, 4.99 months; in July, 3.27 months; in August, 2.96 months. In other words, the eggs marketed at the beginning of the flush season are held longer than those put in two or three months later. When dealers begin to take eggs out of storage in the fall, they usually begin with those that were put in during July and August; when these are exhausted, they use the June and May, and finally the April and March eggs. The explanation of this is that eggs produced in the early months before warm weather arrives are in much better condition for storage than those that come later. The April egg is not only better than the August egg during the following January, but it is even superior after four months of storage to the ordinary "fresh" egg when it is marketed in August. These facts at once suggest the unreasonableness of laws limiting the storage period to a small number of months.

[1] Holmes, Cold Storage Business Features, p. 40.

The same phenomenon occurs in the case of butter. June storage butter is kept an average of 5.32 months; July storage, 4.49 months; August, 4.15 months. June is the great butter month, and fortunately this is the month when butter is of the very highest quality. Creameries that make an indifferent quality of butter during the year often turn out high-scoring butter in June, when the cows first feed on grass. The June product of such a creamery when placed in storage in that month is frequently superior the next December to the fresh butter from the same creamery in December. This fact is of special importance in the supplying of our large cities with high-quality butter the year round. Boston, for example, is known as a cold-storage city; it takes the fine output of June and stores it for future use, thereby insuring a fairly good quality of butter the year round. New York, although it stores large quantities, has more of a preference for fresh butter from first-class creameries. The difference between the two cities in this respect is illustrated by the following figures which show the proportion of total receipts of butter in the two markets for each month during 1912.[1]

Although these figures are not for "butter years," they indicate the large proportion of total receipts in June and other storage months for Boston (nearly one fifth of a year's receipts in June alone). Even the receipts for other months are partly storage goods that have been held in other cities, whereas New York receives mostly fresh goods during the winter. The fresh product from the very best creameries is of course superior

[1] Holmes, Systems of Marketing Farm Products, pp. 300 and 301.

during the winter months to the cold-storage product, but it costs more, and high-scoring butter placed in the " coolers " in June is still of very high quality during the following winter months.

Month (1912)	Receipts of Butter (Per Cent of Total	
	Boston	New York
July	12.4	10.9
August	11.5	9.3
September	9.4	8.7
October	7.5	7.3
November	5.0	6.5
December	4.5	6.2
January	4.9	6.1
February	4.9	6.9
March	5.3	7.8
April	5.8	7.4
May	10.6	9.4
June	18.2	13.5

Although there is often a small surplus carried over from one storage year to another, the usual custom is to practically clear out the storage goods of one year before fresh goods begin to arrive in large quantities. Sometimes, when the price breaks before the storage season is over, some dealers will carry butter over rather than sell at a loss, but this cannot be done with eggs. The following table shows the proportion of total storage receipts of various commodities that were delivered from storage by the end of specified numbers of months during the year 1909–10: [1]

[1] Holmes, Cold Storage Business Features, p. 30.

	Percentage of Total Stored Product Delivered at End of —		
	4 months	7 months	10 months
Fresh beef	86.0	99.0	99.7
Fresh mutton	42.7	99.3	99.5
Fresh pork	96.5	99.9	99.9
Dressed poultry	85.3	96.1	98.9
Butter	53.4	88.4	97.8
Eggs	22.6	75.8	99.9

From this table it is seen that practically all of the meats and poultry had left the storage warehouses by the end of seven months, and that by the end of ten months, practically all the butter and eggs had also been delivered.

Effect of Cold Storage on Quality. — It has already been pointed out in connection with butter and eggs that quality of stored goods cannot be judged solely by the length of time that they have been held in storage; much more important than the length of storage period, within reasonable limits, is the condition of goods when they are placed in storage. Perishable commodities of course deteriorate in cold storage, but the deterioration is so successfully retarded in the case of the principal cold-storage products that their wholesomeness, and to a certain extent their flavor, are preserved for several months, thereby making accessible to the consuming public products which they would otherwise have to do without, except by paying well-nigh prohibitive prices. The keeping qualities of the different commodities vary; butter keeps better than eggs and poultry but

April eggs are often better than most of the current receipts of "fresh western" eggs in eastern markets in November and December.

The effect of cold storage on poultry is well illustrated by an experiment conducted by the Bureau of Chemistry of the United States Department of Agriculture, and described by Dr. Harvey W. Wiley in the following words:[1]

At the end of the first three months the jury's verdict in regard to the taste of the articles was wholly unsatisfactory as to being able to discriminate between the cold-storage bird and the freshly killed bird; about as many preferred the one as preferred the other. After a number of discriminations of that kind, on this as well as on other subjects, we came to the conclusion that there was no perceptible deterioration of flavor in the space of three months. In the second period of three months there was a very preponderating testimony in favor of the freshly killed bird, but there were still numerous instances where a juryman would select the six months' bird as being superior in flavor to the fresh bird; but there was such a preponderating vote that we assumed from this fact that a considerable deterioration in taste had taken place at the end of six months. At the end of nine months it was a rare thing for any man on the jury to make any mistake in regard to which was cold-stored and which was not. Occasionally there would be, — as you might expect in all juries generally, — there would be one man on the jury who was obstinate; but the verdict was nearly always unanimous. At the end of the year there was no instance, as far as I can remember, of any juryman having preferred the cold-storage bird.

My own conclusion, from a study of numerous tests of this kind, is that nine months is the limit of storage, as far as chickens are concerned, without distinct impairment of flavor; and applying that to wholesomeness, I can only say that the chemical examina-

[1] Massachusetts Cold Storage Report, pp. 35–36.

tion of these cold-stored birds at nine months and twelve months failed to reveal the development of any so-called poisonous decomposition of the product as far as chemistry is concerned. There was no trace of any such body as far as we could determine by chemical means. Without infections of animals, there was no trace of any such body as that which is commonly known as ptomaine, which is a very common product of the decomposition of flesh; and I infer from that, that, judging by chemical means, there was no objection to cold-storage fowls of the age of nine months or even twelve months, as far as the development of any poisonous product was concerned.

There has been a popular belief that poultry should be drawn before placing in cold storage, and at least two states, Delaware and Kansas, have had statutes prohibiting the sale of refrigerated undrawn birds. This belief has been proved fallacious by the chemists of the United States Bureau of Chemistry, as well as by other scientific investigators. Dr. Mary Pennington testifies as follows: [1] "The common opinion held by the laity is that drawn poultry only should be placed in cold storage and that poultry should be marketed in a drawn condition. Our examinations have all proved to be in favor of the undrawn bird." "You cannot expect a chicken that has been opened and exposed to contamination by the air to retain its maximum keeping quality any more than you could expect it in the case of an apple that is cut in two." Miss Pennington further explains that the drawing of poultry makes possible the development of bacteria which are practically non-existent in the healthy fresh-killed fowl.

[1] Hearings before Senate Committee on Manufactures, 1911, pp. 71 and 72.

As for the effect of cold storage on eggs, Dr. Wiley has said that fresh unfertilized eggs laid early in the season are difficult to distinguish from the fresh by taste alone at the end of eight months. Ordinary high-grade commercial eggs can be kept well for nine months, but after about six months, a " storage taste " is apt to develop, and this throws them out of the " soft-boiled " class.[1] But all the eggs placed in storage are not high-grade, as may be judged from the defective method of egg marketing described in Chapter IX, and many of them develop the cold-storage flavor before the end of six months. This is especially true of fertilized eggs marketed during the hot summer months. Nevertheless, the development of a musty flavor does not make them unwholesome, even though they are much less palatable than strictly fresh eggs. It must be remembered, however, that the strictly fresh egg is a great rarity during the greater part of the year, and must come from near-by localities. The so-called fresh western egg, on which the large cities must primarily rely, is not strictly fresh, and most of the current receipts in December are apt to be inferior to the high-class egg placed in storage during the preceding April.

As for the general effect of cold storage on health, Professor William T. Sedgwick of the Massachusetts Institute of Technology testified as follows before the Massachusetts Cold Storage Commission:[2]

" So far as I am aware, there is no evidence whatever that cold storage is in any way prejudicial to the public

[1] Senate Document No. 486, 61st Congress, 2d Session, pp. 11, 12.

[2] Report, pp. 32–33.

health. . . . Various allegations, of course, have been made touching the wholesomeness of cold-storage materials, such as that deterioration takes place during cold storage, whereby people are poisoned, or otherwise badly affected, but I have yet to hear of a single instance of carefully investigated and well-authenticated food poisoning due to the effects of cold storage, — to deterioration during proper cold storage. . . . In fact, I am enthusiastic about cold storage, and what it is doing for mankind to-day. . . ." Professor Sedgwick also said in this connection: "When we got the art of canning, we made a great step forward in saving the surplus of one season and time up against the scarcity of another season and time, and when we got cold storage we made another important forward step, in my opinion almost equally, perhaps equally, as great. Every one admits that the salvage of food, especially in these days of increasing costs and increasing population, is of fundamental importance."

Cold-storage Charges. — The cost of carrying goods in storage is surprisingly small per unit of goods stored, although in addition to the actual storage fee, interest and insurance have to be considered, and oftentimes drayage to and from the warehouse. The warehouse companies usually offer season rates on butter and eggs up to the following January first, and they often vary their charges according to the quantity of goods stored. For example, the rate on eggs in one city from storage season of 1914 to January 1, 1915, was graduated from 45 cents a case on less than 500 cases down to 35 cents on over 10,000 cases. Since there are 30 dozen eggs in a

case, this rate means from 1 1/6 to 1 1/2 cents a dozen for from 4 to 6 months' storage. The following table indicates the cost of storage, insurance, and interest on certain commodities in New York:[1]

ANALYSIS OF STORAGE CHARGES ON FOOD PRODUCTS AT HYPOTHETICAL COST PRICES IN NEW YORK CITY

COMMODITY	HYPOTHETICAL COST PRICE	STORAGE CHARGE FOR SIX MONTHS	INSURANCE AT .416 FOR SIX MONTHS	INTEREST AT 6% FOR SIX MONTHS	TOTAL STORAGE EXPENSES	INCREASE IN COST DUE TO STORAGE
Butter . .	$ .25 lb.	$.01	$.000725	$.0075	$.268225	$.018
Poultry .	.18 lb.	.01	.000522	.0054	.195922	.016
Eggs . .	.20 doz.	.0089	.00059	.006	.21549	.016
Cheese . .	.15 lb.	.006	.000435	.0045	.16095	.011
Dried fruit	.10 lb.	.00333	.00029	.003	.106623	.007
Nuts in shell	.15 lb.	.0075	.000435	.0045	.162435	.012
Nuts shelled	.30 lb.	.005	.00087	.009	.31487	.015
Green fruit	2.50 bbl.	.50	.00725	.075	3.0825	.582

Dealers who place goods in storage are necessarily speculators. Unless the price rises sufficiently during subsequent months to cover storage costs, they lose money. Some years large profits are made; other years are disastrous; some years the price goes high enough for a certain period, but the market breaks before the dealers have sold out their storage holdings. The uncertainty from the point of view of the dealer, and the general profitableness of egg storage are brought out in the following table which gives average monthly prices of fresh eggs in April, May, and June, and average

[1] Report of the Committee on Markets, New York State Food Investigating Commission, p. 42.

prices of cold-storage eggs during the following fall and winter months.[1] The figures are given in detail for only four years, but the averages in the last line cover a ten-year period.

INDICATIONS OF AVERAGE PROFIT FROM EGG STORAGE. AVERAGE PRICES AT NEW YORK OF STORAGE PACKED FRESH EGGS IN APRIL AND MAY, OF BEST WESTERN FRESH IN JUNE, AND OF THE BETTER QUALITIES OF REFRIGERATOR EGGS FROM SEPTEMBER TO FEBRUARY

	FRESH			REFRIGERATOR					
	April	May	June	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
1912–13	21.51	20.64	20.08	23.62	23.89	22.78	19.11	19.79	18.27
1911–12	17.70	18.07	16.78	20.65	20.58	21.61	23.35	28.81	33.89
1910–11	22.80	22.01	21.05	24.45	25.12	25.30	25.08	21.70	14.95
1909–10	21.96	22.73	22.08	25.18	25.13	24.36	23.47	27.05	24.29
Averages for 10 years .	19.33	19.45	18.75	22.64	22.62	23.10	23.15	23.12	22.55

It will be observed that in 1912–13 the holders of eggs lost money by keeping them later than November; in 1911–12 the longer they were kept the greater the profit; the year 1910–11 was profitable up to January, but disastrous for those who held longer than that; and the year 1909–10 was a good normal year with fair profits. The ten-year averages show a rather remarkable adjustment of prices between fresh eggs and the same eggs after being held in storage. In fact speculation in eggs, butter, and poultry brings about an almost automatic distribution of these commodities throughout the year, and adjusts the surplus supply of overproduction periods to the surplus demand in periods of scant production.

[1] Brief by F. G. Urner presented in hearings on McKellar Bill, H.R. 9530, 1915.

Effect of Cold Storage on Prices. — Interest has centered on cold storage within the past few years largely because there has been a common belief that it has been partly responsible for the increase in food prices since 1900. One reason for this belief has been the common notion that there is a "cold-storage trust," *i.e.* that a few large warehouse companies buy up supplies of foodstuffs and withhold them from the public so as to raise prices artificially. It has been shown that the large public warehouses do not buy goods, except occasionally in small quantities, but rent space to thousands of individual dealers, each of whom stores on his own account. It has also been shown that the profits accruing to dealers who store foodstuffs are apparently not excessive, especially in view of the great speculative risk involved. Although minor and temporary price manipulations are undoubtedly possible to a certain extent among large dealers, there is no evidence that there is or can be any effective monopoly which can have influence on the general price level.

Aside from the question of monopoly, however, there are two ways in which cold storage in itself may affect prices: first, with regard to fluctuations of prices throughout the year; and second, with regard to the general level of prices from year to year. It would appear from *a priori* reasoning that the cold-storage business would cause an increased demand for commodities during season of surplus production, and hence raise the price at that time; and that the greater supply available during season of scant production would reduce the price at that time. In other words, it would appear that cold

storage should tend to bring about a greater uniformity of prices throughout the year. That this has actually been the result has been demonstrated statistically. Mr. Frank G. Urner of the Urner-Barry Company of New York has compiled figures comparing the difference between flush-production and scant-production prices of butter and eggs for two periods, viz., 1880–92, before cold storage had come into general use, and 1902–11, when cold storage was commercially important. The results were as follows:[1]

	1880 TO 1892 (CENTS PER POUND)	1902 TO 1911 (CENTS PER POUND)
Butter:		
Average price May to Aug.	21.9	23.4
Average price Nov. to March (fresh)	34.3	28.9
Average price Nov. to March (cold-storage)	—	26.7
Eggs:		
Average price April to July	15.8	18.7
Average price Oct. to Feb. (fresh)	25.7	28.1
Average price Oct. to Feb. (cold-storage)	—	22.4

These figures indicate that while the price of butter in New York varied from 21.9 cents to 34.3 cents per pound during the years before cold storage became a factor, the variation in the latter period was only from 23.4 cents to 28.9 cents. The effect is not so clear for eggs, because although the price during surplus production was higher for the later period, the price during scant production was also higher than for the earlier

[1] From a paper written by Mr. Urner for the Convention of American Warehousemen's Association at Pittsburgh, December, 1912.

period. The price of fresh eggs is not reduced so appreciably by cold storage as is the price of fresh butter, because there is a greater difference in quality between fresh and storage eggs than in the case of butter. If it had not been for cold storage, however, it is difficult to say how high the price of strictly fresh eggs might have risen during recent years of increasing prices. It will also be observed that consumers profited greatly from the relatively low price of storage eggs in season of scant production during the later period. Studies made by the Federal Department of Agriculture amply bear out the fact that cold storage tends to level prices throughout the year.[1]

As for the effect of cold storage on the general price level over a series of years, it is practically impossible to determine the relation statistically because of the influence of other factors. Prices in general have risen since the pre-storage period, and it is impossible to tell how much this advance may or may not have been arrested by the influence of cold storage. Another complicating feature is the fact that to estimate the possible effect of cold storage on prices, it is necessary to weight the average monthly prices with the relative amount consumed during the various months. By weighting butter prices in this way, and by taking into account the relative amounts of fresh and cold-storage butter consumed at their respective prices, it has been shown statistically that the average price paid for butter in New York was actually a bit lower during the period

[1] See especially Holmes, Cold Storage and Prices, Bulletin 101, Bureau of Statistics, U. S. Department of Agriculture, 1913, pp. 12 to 16, and pp. 68 and 69.

from 1902 to 1911 than during the period 1880 to 1893,[1] while for the country at large the price had increased but slightly; and that the price of eggs on this basis had also shown a very slight increase. There can be no doubt but that cold storage has been an important factor in bringing about this result — a result which might well be expected when it is considered that cold storage makes available vast quantities of products during season of natural scarcity at prices only a little in advance of the prices during season of surplus production. It might be argued that if cold storage tends to reduce prices in general to the consumer it therefore must react to the disadvantage of the farmer. Although the farmer receives somewhat less for his products during season of scarcity, it must be remembered that it has the opposite effect during season of surplus production, which probably at least counterbalances the loss on the small amounts produced the rest of the year. It is hardly likely that egg, butter, and poultry production on the present huge scale would be profitable to farmers if it were not for the fact that cold storage creates a market during the months when these commodities are produced in greatest abundance. In fact, cold storage has a beneficial effect on all classes involved.

Cold-storage Legislation. — Coincident with the awakened interest in marketing problems and the feeling that cold storage has been partly responsible for the increase in prices since 1900, there has arisen a demand for legislation to regulate cold-storage warehouses.

[1] Holmes, Cold Storage and Prices, Bulletin 101, Bureau of Statistics, U. S. Department of Agriculture, 1913, p. 65.

Popular prejudices and misconceptions have led to the introduction of many absurd bills in both state and national legislatures, and to the passage of rather drastic laws in a few states. Kansas passed her law prohibiting the sale of undrawn refrigerated poultry in 1907, but no general cold-storage legislation was passed until 1911, when five states enacted measures. There are now (1915) eleven states that have general laws, but these laws differ from each other in important points, a condition that has given rise to a demand for uniform state laws and for national legislation. The need of uniform legislation has led to the drawing up of a model bill by a committee of the National Conference of Commissioners on Uniform State Laws, which was approved and recommended for adoption by that organization in October, 1914.

In general, the state laws that have been passed define cold-storage warehouses as those that are artificially cooled to temperatures of 40° F. or below, and in which articles of food are kept for thirty days, or more. The principal features which these laws have in common are as follows:

1. Cold-storage houses are placed under the supervision of the state board of health or state food commissioner.

2. Products must be marked or stamped with date of entry into storage and in some cases with date of delivery from storage.

3. The length of time which goods may be held in storage is limited.

4. Most of the laws require retailers to make it known in some way that they handle cold-storage products.

5. Provision is made for reporting to state board the amounts of foods held in storage.

6. Licenses must be procured from state authorities by cold-storage warehouses.

The principal provisions of the eleven state laws[1] and the model law referred to above are given in greatly condensed form in the following tabular statement, and the model bill is given in full at the end of the chapter.

SUMMARIZED STATEMENT OF COLD-STORAGE LAWS

Time Limit	Marking	Reports	Regulation of Dealers	Supervision of Warehouses
		California		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Quarterly.	Store must display sign "Cold-storage Goods Sold Here."	State Board of Health; license ($50).
		Delaware		
6 months. (May be extended.)	With dates of receipt.	Quarterly.	Cold-storage eggs must be sold from original container.	State or Local Board of Health.
		Indiana		
9 months.	With dates of receipt and withdrawal.	Records to be kept but no reports.	Card "Cold-storage" on every receptacle containing eggs stored 30 days. Bag in which eggs delivered marked "Cold-storage."	State Board of Health; license ($10).

[1] Condensed from statement of H. E. Barnard, State Food and Drug Commissioner of Indiana, before Third International Congress of Refrigeration, Washington-Chicago, 1913.

SUMMARIZED STATEMENT OF COLD-STORAGE LAWS

(Continued)

Time Limit	Marking	Reports	Regulation of Dealers	Supervision of Warehouses
		Iowa		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Quarterly.	Store must display sign "Cold-storage Goods Sold Here."	Dairy and Food Commissioner; license ($25).
		Louisiana		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Quarterly.	Store must display sign "Cold-storage Goods Sold Here."	State Board of Health; license.
		Massachusetts		
12 months. (May be extended.)	With date of receipt.	Quarterly.	Store must display sign "Cold-storage Goods Sold Here."	State Board of Health; license ($10).
		Nebraska		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Quarterly.	Purchasers must be notified when goods have been held in cold storage.	State Food, Drug, and Dairy Commissioner; license ($5) and inspection fees.
		New Jersey		
10 months. (May be extended.)	With date of receipt.	Quarterly.	None.	State Board of Health.
		New York		
10 months. 12 months for butter.	With dates of receipt and withdrawal.	Three reports annually.	Cold-storage products must be represented as such when sold.	State Department of Health; license ($20).

SUMMARIZED STATEMENT OF COLD-STORAGE LAWS

(*Continued*)

Time Limit	Marking	Reports	Regulation of Dealers	Supervision of Warehouses
		North Dakota		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Quarterly.	Store must display sign "Cold-storage Goods" sold here.	Food Commissioner; license ($10).
		Pennsylvania		
Fowl, — Drawn, 5 months; undrawn, 10 months. Eggs, 8 months. Butter, 9 months. Fish, 9 months. Meats, 3 to 6 months.	With dates of receipt and withdrawal.	Quarterly.	Container holding and package delivered to purchaser to be marked "Wholesome Cold-storage Food."	Dairy and Food Commissioner; license ($50).
		Model Law		
12 months. (May be extended.)	With dates of receipt and withdrawal.	Monthly.	Sign saying "Cold-storage Goods" to be placed "on the bulk mass or articles of food."	State Food Commissioner or other appropriate official.

Of the various state laws, that of Pennsylvania is the most drastic, although Delaware comes a close second, especially with respect to the length of time that goods

may be held. There is a most pronounced variation in the length of time allowed by the different laws — ranging from three to six months for meat in Pennsylvania and six months for all products in Delaware to twelve months in several of the other states. The model law allows twelve months, with possible extensions not exceeding four months, and it is generally conceded by students of the problem that this is just and reasonable. The six-month limit in Delaware is unjust and unscientific; the limit of eight months on eggs in Pennsylvania is unjust, and works a real hardship. This provision means that eggs placed in storage in April must come out during the following December, whereas it has been shown previously that April eggs are much superior in December to August eggs, which would have been in storage only four months by that time. The limitation of nine months on butter is also unnecessary. It has been found that the usual cold-storage goods — and the various acts apply only to these — retain their wholesomeness for at least twelve months. During the 1914–15 session of Congress there was introduced a bill which among other provisions debarred from interstate commerce eggs held in cold storage more than six months, and all held more than three months unless inspected; and hearings were held on this bill.[1] It is surprising that such a proposal should have received serious consideration in view of the facts brought forth by the Federal Department of Agriculture during recent years.

All of the laws provide that goods must be tagged or stamped with date of entry into cold storage, and most of

[1] The McKellar Bill, H. R. No. 9530.

them with date of withdrawal. This is a good provision; the only question arises in connection with the extent to which goods should be marked as cold-storage goods in such a way as to inform the final purchaser that the goods he is buying are cold-storage goods. Most of the states content themselves with the provision that retailers shall display a sign bearing the words "Cold-storage Goods Sold Here." The purchaser then has to rely on the honesty of the salesman with regard to any specific lot of goods he is buying. Pennsylvania requires that the package delivered to the consumer be marked. The New York law requiring retailers to notify purchasers is ineffectual in that it is too easily violated. The only argument against compelling the marking of packages in such a way as to actually apprise the purchaser that he is buying cold-storage food is that the general public has such a prejudice against cold-storage products that such products would be unjustly discriminated against, with the result that the economic benefits derived from cold storage would be partially destroyed. Instead of educating the public gradually by catering to this prejudice, it might be better to educate them suddenly by requiring all retailers in some way to make it definitely known to their customers when they are buying cold-storage products. This would at least prevent abuses commonly practiced by retailers, and the ill-effects of such legislation would probably be but temporary.

In addition to the points covered in the tabular summary, most of the laws give the supervising state official power to inspect warehouses, and if they are not kept in sanitary condition to revoke licenses. Some of the laws

provide that goods once released from storage shall not be re-stored, but such provision is unjust unless it makes possible the removal from one warehouse to another, perhaps from one city to another, as in the model bill at end of chapter. It is also generally provided that unwholesome goods shall never be placed in storage, unless marked plainly that such goods are not intended for human consumption. Happily the prejudice against cold-storage products is dying out, due largely to the efforts of the cold-storage houses and the wholesale dealers of the principal storage products; on the whole it is rather surprising that the cold-storage laws already passed are as good as they are, and the prospects are for wise legislation in the future.

UNIFORM LAW RELATING TO THE COLD STORAGE OF CERTAIN ARTICLES OF FOOD

APPROVED AND RECOMMENDED FOR ADOPTION BY THE CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS AT ITS MEETING IN WASHINGTON, D. C., OCTOBER, 1914.

Be it enacted, etc.

SECTION 1. For the purpose of this act, "cold storage" shall mean the storage or keeping of articles of food at or below a temperature above zero of 45 degrees Fahrenheit in a cold storage warehouse; "cold storage warehouse" shall mean any place artificially cooled to or below a temperature above zero of 45 degrees Fahrenheit, in which articles of food are placed and held for thirty days or more; "articles of food" shall mean fresh meat and fresh meat products and all fish, game, poultry, eggs and butter.

SEC. 2. No person, firm or corporation shall maintain or operate a cold storage warehouse without a license so to do issued

by the State Food Commissioner.[1] Any person, firm or corporation desiring such a license shall make written application to the State Food Commissioner for that purpose, stating the location of the warehouse. The State Food Commissioner thereupon shall cause an examination to be made of said warehouse and, if it be found by him to be in a proper sanitary condition and otherwise properly equipped for its intended use, he shall issue a license authorizing the applicant to operate the same as a cold storage warehouse during one year. The license shall be issued upon payment by the applicant of a license fee of . . . . to the Treasurer of the state.

SEC. 3. In case any cold storage warehouse, or any part thereof, shall at any time be deemed by the State Food Commissioner to be in an unsanitary condition, or not properly equipped for its intended use, he shall notify the licensee of such condition and upon the failure of the licensee to put such cold storage warehouse in a sanitary condition or to properly equip the same for its intended use, within a time to be designated by the State Food Commissioner, he shall revoke such license.

SEC. 4. Every such licensee shall keep accurate records of the articles of food received in and of the articles of food withdrawn from his cold storage warehouse, and the State Food Commissioner shall have free access to such records at any time. Every such licensee shall submit a monthly report to the State Food Commissioner, setting forth in itemized particulars the quantities and kinds of articles of food in his cold storage warehouse. Such monthly reports shall be filed on or before the fifth day of each month, and the reports so rendered shall show the conditions existing on the last day of the preceding month reported and a summary of such reports shall be prepared by the State Food Commissioner and shall be open to public inspection on or before the tenth day of each month.

SEC. 5. The State Food Commissioner shall inspect and supervise all cold storage warehouses and make such inspection of

[1] Wherever in this act the words "State Food Commissioner" are used the name of any other officer or board may be substituted.

articles of food therein as he may deem necessary to secure the proper enforcement of this act, and he shall have access to all cold storage warehouses at all reasonable times. The State Food Commissioner may appoint such persons as he deems qualified to make any inspection under this act.

SEC. 6. No article of food intended for human consumption shall be placed, received or kept in any cold storage warehouse, if diseased, tainted, otherwise unfit for human consumption, or in such condition that it will not keep wholesome for human consumption. No article of food, for use other than for human consumption, shall be placed, received or kept in any cold storage warehouse unless previously marked, in accordance with forms to be prescribed by the State Food Commissioner, in such a way as to indicate plainly the fact that such article of food is not to be sold or used for human food.

SEC. 7. No person, firm or corporation shall place, receive or keep in any cold storage warehouse in this state articles of food unless the same shall be plainly marked, stamped or tagged, either upon the container in which they are packed, or upon the article of food itself, with the date when placed therein; and no person, firm or corporation shall remove, or allow to be removed, such article of food from any cold storage warehouse unless the same shall be plainly marked, stamped, or tagged, either on the container in which it is enclosed or upon the article of food itself, with the date of such removal, and such marks, stamps and tags shall be *prima facie* evidence of such receipt and removal and of the dates thereof. All articles of food in any cold storage warehouse at the time this act goes into effect shall, before being removed therefrom, be plainly marked, stamped or tagged with the date when this act goes into effect and the date of removal therefrom.

SEC. 8. No person, firm or corporation shall hereafter keep or permit to remain in any cold storage warehouse any article of food which has been held in cold storage either within or without the state, for a longer aggregate period than twelve months, except with the consent of the State Food Commissioner as here-

inafter provided. The State Food Commissioner shall, upon application during the twelfth month, extend the period of storage beyond twelve months for any particular article of food, provided the same is found upon examination to be in proper condition for further cold storage. The length of time for which such further storage is allowed shall be specified in the order granting the permission. A report on each case in which such extension of storage may be permitted, including information relating to the reason for the action of the State Food Commissioner, the kinds and amounts of the articles of food for which the storage period was extended, and the length of time for which this continuance was granted, shall be filed, open to public inspection, in the office of the State Food Commissioner, and shall be included in his annual report. Such extension shall be not more than sixty days; a second extension of not more than sixty days may be granted upon a re-examination, but the entire extended period shall be not more than one hundred and twenty days in all.

SEC. 9. It shall be unlawful to sell, or to offer for sale, any article of food which has been held for a period of thirty days or over in cold storage either within or without the state, without notifying persons purchasing, or intending to purchase, the same, that it has been so held, by the display of a placard plainly and conspicuously marked, "Cold Storage Goods" on the bulk mass or articles of food; and it shall be unlawful to represent or advertise as fresh any article of food which has been held in cold storage for a period of thirty days or over.

SEC. 10. It shall be unlawful to return to any cold storage warehouse any article of food which has been once released from storage for the purpose of placing it on the market for sale. It shall be unlawful to transfer any article of food from one cold storage warehouse to another if such transfer is made for the purpose of avoiding any provision of this act, and such transfer shall be unlawful unless all prior stampings, markings and taggings upon such article shall remain thereon.

SEC. 11. The State Food Commissioner may make all necessary rules and regulations to carry this act into effect. Such rules

and regulations shall be filed in the Commissioner's office, and shall not take effect until (. . . days) after such filing.

SEC. 12. Any person, firm or corporation violating any provision of this act shall be guilty of a misdemeanor and shall upon conviction be punished for the first offense by a fine not exceeding . . . . . . ($ . . .) and for the second or any subsequent offense by a fine not exceeding . . . . . ($ . . .) or by imprisonment of not more than six months, or by both such fine and imprisonment in the discretion of the court.

SEC. 13. This act shall be so interpreted and construed as to effect its general purpose to make uniform the law of those states which enact it.

SEC. 14. This act may be cited as the Uniform Cold Storage Act.

SEC. 15. All acts or parts of acts inconsistent with this act are hereby repealed.

CHAPTER IX

THE COST OF MARKETING

Meaning of "Cost of Marketing." — The difference between the price received by the farmer for any commodity and the price paid by the final consumer measures roughly the cost and profits of marketing that commodity. Since net profits constitute such a small part of this spread or differential, and since a certain amount of net profit is necessary to induce middlemen to stay in business, it is at least approximately correct to refer to this spread as the cost of marketing. In reality, marketing costs begin when commodities leave the farm, or in the case of some products, when they are packed or prepared for marketing; but these costs are practically impossible to measure (except in some cases of packing) and the price paid to the farmer at local shipping point furnishes a definite and convenient starting point for the purposes of considering the factors affecting the cost of marketing. Furthermore, the total spread between producer and consumer indicates a true *marketing* cost only for those products that pass through the channels of trade and reach the consumer without change in form; the slaughtering and dressing of live stock, the conversion of wheat into flour, and of butter fat into butter involve manufacturing costs, and in any careful analysis of marketing costs they should be

excluded, because they frequently constitute a substantial part of the total spread between producer and consumer. In some cases these manufacturing costs are so slight as to result in no great error if they are included; in other cases the manufacturing process alters goods to such an extent, or combines them with other materials in such a way that their identity is entirely lost, and it is impossible to consider the cost of marketing further than to the point of purchase by the manufacturer. Fruits and vegetables that are preserved by the canning process, barley when manufactured into beer, beets when manufactured into sugar, and cotton and wool when transformed into cloth, fall into this latter class.

It is convenient to consider the cost of marketing from the standpoint of the farmer by expressing the amount that he receives as a percentage of the final price. The difference between this and 100 per cent therefore represents the proportion of final price consumed by marketing costs. It is also highly desirable that a common basis — the final retail price — be used throughout in order to render the various percentages comparable. In general, marketing costs include those of handling at local points, transportation, handling by the various classes of wholesalers, including storage in many instances, drayage and delivering to retailers, and handling through retail stores, including delivery to consumers.

Proportion of Retail Price Received by Farmer. — It has become a common habit of writers and speakers on this subject to refer to the proportion of final retail prices that farmers receive on the average for all their

products, generally with the intention of presenting such a figure as *prima facie* evidence of gross wastefulness in the marketing process. The average which has perhaps been spread most commonly throughout the land is 35 per cent. If such a figure is to be used in drawing any conclusion as to the efficiency of the marketing system, it is highly desirable that it bear at least an approximate relation to the actual facts in the case. One oft-quoted writer has placed it at 46 per cent.[1] Professor King[2] presents figures based on the Philadelphia market from which he concludes that "the farmer received $1 for goods for which the Philadelphia consumer paid $2.35," and adds that "This is the average increase of consumers' over producers' prices." This means that the former get 42.6 per cent of final prices. The commodities used in determining this average were butter, potatoes, eggs, huckleberries, blackberries, live poultry, corn, and tomatoes, and the average is a simple, unweighted one, meaning that huckleberries are given as much importance as butter, so that the result is of no scientific value, although it should be said in justice to this writer that he mentions the fact that the cost of marketing grain and staple products is not so high. Mr. George K. Holmes, Statistician of the Bureau of Crop Estimates of the United States Department of Agriculture, has said that for fruits, potatoes, poultry, and dairy products, the farmer receives on the average 53 per cent, and that if vegetables are included, the average proportion is just

[1] B. F. Yoakum in *World's Work*, December, 1912.

[2] C. L. King, Lower Living Costs in Cities, pp. 18 and 19.

about one half.[1] He also says that he knows "of no stronger indictment than this of the costliness and of the economic waste of our distributive system." It has been determined that on the average, Minnesota farmers receive about 60 per cent of the prices finally paid for their products.[2] This average is too high

[1] Farmers' and Consumers' Prices of Farm Products, read by Mr. Holmes at the 71st annual meeting of the New York State Agricultural Society, and published as Bulletin No. 23 of the New York Department of Agriculture.

[2] This figure is a rough average of the proportions of final retail prices received by farmers for various commodities, weighted with the respective values of the commodities that were marketed by Minnesota farmers. The values marketed were obtained directly from the 1910 census in some cases; in others, they have been estimated from production statistics. The proportions received by producers as used in this computation do not agree absolutely with those given below on page 182, because allowances have had to be made for many complicating factors. The true weighted average of these figures is over 63 per cent, although it is referred to as 60 in the text for the purpose of being safely conservative. The figures used in the computation are as follows:

	Value of Commodity Marketed	Per Cent of Retail Price Received by Farmer
Milk	$ 7,000,000	45
Cream	1,400,000	40
Butter fat	11,000,000	75
Dairy butter	3,600,000	75
Poultry	1,800,000	45
Eggs	6,200,000	69
Live stock	34,000,000	55
Grains	56,000,000	70
Potatoes	3,000,000	50
Other vegetables	1,000,000	30
Fruits	200,000	30

This is taken from Market Distribution by the author in Studies in Marketing of Farm Products, p. 7.

for the whole country, because Minnesota raises a small variety of staple products that are marketed on relatively small margins. An approximate average for the whole country would undoubtedly lie between 55 and 60 per cent.[1] This is considerably different from 35 per cent!

But such figures representing the average proportion of final prices received by farmers are of little value, first, because there are no data from which to determine a correct average for the whole country; second, because manufacturing costs have to be included in total spreads; and third, because even if it could be accurately determined, it would still be extremely misleading, and would furnish no basis whatever for drawing conclusions as to the general efficiency or wastefulness of the marketing process.

Cost of Marketing and Number of Middlemen. — There are those who would have us believe that a high cost of marketing is due to the presence of a large number of middlemen between producer and consumer. Typical of this line of reasoning, though moderate in tone, are the following passages from the introductory paragraph of an article on "Methods and Costs of Marketing" in the Yearbook of the United States Department of Agriculture of 1909: "These variations in the expense of distribution are due partly to differences in the number of middlemen intervening between producer and con-

[1] In private correspondence Mr. Holmes states as his opinion that if the great staples such as grain and cotton are included, "the percentage received by the farmer will be found to be much larger" than for the products to which his 50 and 53 per cent apply.

sumer. For some products the trade is so well organized that few intermediate sales are made and the ultimate purchaser is but a step or two removed from the farmer, while for other products the course of distribution is long and costly."

It was pointed out in Chapter I that there is ample economic justification for the splitting up of the marketing process into a number of successive steps; that specialization of this sort is universally accepted as salutary and cost-reducing in other branches of production, and that there is no valid reason why such division of labor should not have just as beneficial results in the marketing part of production. Furthermore, it was pointed out that the cost of marketing may sometimes be reduced by the addition of another middleman-specialist. Instances illustrating this principle are given in other places in this book, as, for example, the auction company in the fruit trade,[1] and the general consignee [2] in the marketing of Louisiana vegetables. As a usual rule, an additional middleman is not allowed to appear in a trade unless there is an economic justification for his existence.[3]

In making analyses of marketing costs, one of the most striking features is the great variation in the costs of

[1] See Chapter VII.

[2] See Chapter VI.

[3] This does not mean that there are no instances where the costs of marketing might be reduced by a consolidation of existing middlemen. Although an additional middleman rarely appears without some economic justification, subsequent changes or developments sometimes result in a situation whereby the functions of this middleman can be advantageously taken over by some one else.

marketing different commodities, — a feature commonly overlooked by most writers on this subject. If a large number of middlemen is responsible for high marketing costs, we should naturally expect that the variations in costs of marketing different commodities might depend on the number of middlemen through whose hands these different commodities pass on their way from producer to consumer, as intimated in the quotation from the Agricultural Yearbook. As a matter of fact, these variations cannot be explained to the slightest extent in this manner. Eggs pass through as many hands as potatoes, and yet the farmer receives nearly 70 per cent of the final price of the former, and only 55 per cent of the latter. Minnesota butter marketed in New York (1500 miles away) ordinarily passes through the hands of four middlemen after it leaves the creamery, including the railroad company, and yet the creamery receives over seventy-five per cent of the final retail price, whereas in the case of lettuce raised within ten miles of Minneapolis, when marketed in that city through only one middleman — the retail store — the farmer receives only thirty-three and one third per cent of the retail price. Illustrations of this sort might be added indefinitely. In fact, it may be concluded that the cost of marketing does not depend on the number of middlemen involved, but rather on certain characteristics of the commodities marketed. It may also be said that the existence of a large number of middlemen in some trades where the cost of marketing is high is not the cause of the high marketing costs, but rather the result of conditions which

render the commodity in question a difficult one to market — in other words, a condition which calls for a high degree of specialization. This is admirably illustrated by certain branches of the fruit trade, where gross marketing costs are high, but where specialization in the wholesale trade among three successive handlers — receivers, auction companies, and jobbers — is practically indispensable in the largest cities.

Cost of Marketing Varies for Different Commodities.— Variations in cost of marketing different products are shown in the diagram below. The figures apply to Minneapolis for products raised in Minnesota at from 100 to 150 miles from Minneapolis, and they were obtained in February, 1914, so that they do not apply accurately to all places and for all times. It is interesting to note, however, that averages of specific instances given in Carver's *Rural Economics*, based largely on the Boston market, for products raised at varying distances from Boston and at different dates, check substantially with these Minneapolis figures, indicating that they serve as at least an approximate measure of the variations in cost of marketing different products, which is the object of their use here.

In explanation of these figures it should be said that the seventy-seven per cent for butter is the proportion of retail price received by the country creamery, and not by the farmer for his butter fat; if reduced to this basis, the proportion received by the farmer would be only a little over seventy per cent. Manufacturing costs are included with marketing costs for live stock and chickens, and also for wheat through the flour mill.

The figure for milk refers to shipments from farmers at some distance from the city, rather than that delivered by local or near-by dairies which have their own cows. The figures for wheat are to be interpreted as follows: the farmer receives about ninety per cent of the price paid for his bushel of wheat by the Minneapolis miller;

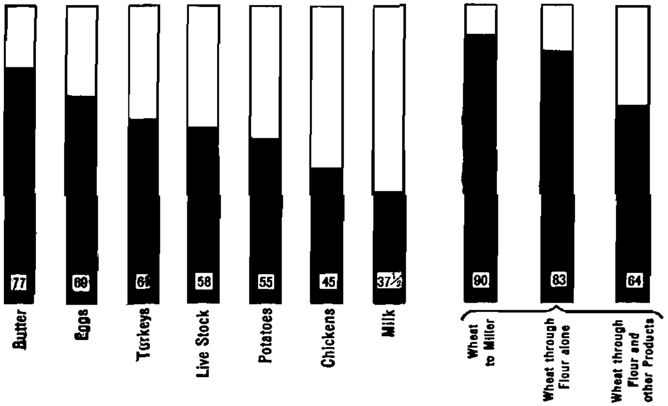

Diagram showing Approximate Proportion of Minneapolis Retail Prices received by Minnesota Farmers, February, 1914.

the farmer receives about eighty-three per cent of the price paid by the housewife for the flour made out of his bushel of wheat; but there are by-products, such as bran and middlings, which come out of the wheat, and the farmer receives about sixty-four per cent of the price finally paid for the flour and all other products into which his bushel of wheat is manufactured.[1]

[1] These proportions for wheat are based on Bulletin No. 130, United States Bureau of Labor Statistics. The data for this bulletin were collected in Kansas and Kansas City but they apply approximately to the Minneapolis market.

In this last case, the wheat has gone through a country elevator, been transported from 100 to 200 miles, sold by a commission man (possibly stored by a terminal elevator), manufactured into flour in the flour mill, sold to a wholesale grocer, and then to a retail dealer, and yet the producer receives sixty-three per cent of the final price. Compare this with milk which passes through the hands of a railroad company and one other middleman, and for which the farmer receives thirty-seven and one half per cent of the final price.

Factors Affecting the Cost of Marketing. — The principal reasons for this variation in cost, or in other words the factors affecting the cost of marketing, are as follows:

1. *Perishability.* As a rule, the more perishable a commodity is, the greater the cost of marketing. Milk is so perishable that it has to be delivered every day, and expensive facilities have to be provided for its proper handling. Such commodities as lettuce, strawberries, peaches, etc., are so highly perishable that the cost of marketing is greater than for any other class of farm products, — oftentimes much greater than for any commodities shown in the preceding diagram. In the case of other commodities, like butter and eggs, extreme perishability is largely overcome by the fact that they may be indefinitely preserved as wholesome foodstuffs by cold storage.

2. *Waste and shrinkage.* Closely allied to perishability is the extent to which products are subject to damage, breakage, or shrinkage in transit, in storage, and in preparation for market. Breakage is still an

important factor in egg marketing, although the United States Department of Agriculture is studying this problem with a view to effecting an improvement. Shrinkage is an important item in the marketing of live stock and potatoes. Waste from deterioration in quality and decay is a serious matter in marketing perishable vegetables and fruits, not only during transit (in spite of highly efficient refrigerator-car service) and on account of congestion in terminals, but more especially in retail stores, where losses from this cause are particularly severe.

3. *Regularity or irregularity of supply throughout the year.* Many farm products are harvested during one short season of the year, and this greatly complicates the marketing problem. Although butter and eggs are produced in greater volume during some parts of the year than others, the fact that they are produced to a certain extent at all seasons of the year undoubtedly reduces their costs of marketing. It is fortunate for the consuming public that live stock is marketed with fair regularity throughout the year.

4. *Volume in which product is handled.* When commodities are handled in large volume, dealers can afford to sell them on smaller margins; in other words, large volume of business means rapid " turn-over " of capital, and consequently low overhead charges per unit of commodity handled. This applies particularly to the wholesale trade, where a single firm ordinarily handles commodities in great quantities. The facilities for marketing have also become highly developed for commodities that are handled in large volume. To

say nothing of superior transportation facilities, efficient cold-storage plants aid in the marketing of poultry and butter; special loading and unloading machinery and highly efficient terminal elevators in the marketing of grain. Another phase of this same factor is the size of the unit sold at retail. A relatively higher price is charged for potatoes by the quart or peck, than by the bushel. There has been a recent tendency to cut butter into half-pound and even quarter-pound prints, and a relatively higher price must be charged than for pound prints. Unfortunately it is the poorer people who demand these small units. It is often urged that consumers should buy in larger quantities; but the "flat dwellers" in great cities have neither space not proper means of sanitary preservation to do this, nor do they have money enough at one time to stock up with large quantities of perishables, — and yet it is true that they often carry the purchase of minute quantities to an unnecessary extreme.

5. *The adaptability of a commodity to subdivision into standard grades.* Poorly graded goods always cost more to market than do goods that are sorted or classified by grades. It was shown in Chapter III that sale by sample and sale by description are more economical than sale in bulk, and that the extent to which the two former methods of sale may supersede the latter depends primarily on the possibility of establishing uniform and well-recognized grades. Commodities differ greatly in this respect; wheat may be so closely subdivided as to be sold by merely naming the grade; barley, on the other hand, cannot be graded so

closely, and buyers usually prefer to inspect with great care a sample of the barley offered for sale. Fortunately, a carload is of sufficiently uniform quality to make sale by sample possible. Potatoes very frequently have to be inspected in the car; grades are not highly standardized, and a small sample is not likely to be a sufficient index of the quality of a carload. The well-recognized method of scoring butter on the basis of one hundred points greatly aids in the economical marketing of that product. The possibility of having standard grades makes possible acceptable market quotations which may be used as "trading bases" and which greatly facilitate the marketing of commodities.

6. *The relation between bulk of a commodity and its intrinsic value.* The importance of the freight rate depends largely on this relation; potatoes are of large bulk and of small intrinsic value; hence the transportation charge constitutes a larger proportion of the total spread between producer and consumer than in the case of wheat, for example, which is a commodity of smaller bulk in relation to its value. But even wheat is of low value per unit of weight (say one and one half cents a pound) as compared with butter (say thirty cents a pound); the freight rate is by far the most important single element in the cost of marketing wheat, whereas it is such a minor matter in the case of butter that fancy Minnesota creamery butter sells for practically the same price in New York as it does in Minneapolis.

7. *The extent to which packages are necessary or desirable in preparation for market.* Butter is com-

monly packed at creameries in sixty-pound tubs, and it is often sold from the original tubs in retail stores; whenever it is cut up into pound prints, with parchment wrapper and carton, the cost is about one cent greater. The tendency is for milk to be sold in individual bottles rather than in bulk, and this adds to the cost of marketing. As a usual rule, such additional costs are justified on account of the protection against unsanitary conditions, but in some cases unnecessarily expensive packages or cartons are used to appeal to wealthy consumers.

Transportation as a Factor in Marketing. — The foregoing enumeration of factors affecting the cost of marketing applies to commodities raised at an equal distance from market, *i.e.* distance from market has not been considered as one of these factors. It has already been intimated that in the case of articles of small bulk and high intrinsic value transportation costs are relatively unimportant; but in the case of commodities of large bulk, which are raised only in sections of the country located at great distance from market — and especially if the commodities themselves are perishable thus requiring careful refrigeration in transit, the cost of transportation becomes a relatively important item. Oranges, for example, are raised in only two sections of the United States, both at a great distance from the principal consuming centers, and consequently the cost of transportation is an exceedingly important item in the spread between grower and consumer. Much the same considerations apply to apples of the Northwest, California cantaloupes, Texas peaches and tomatoes, etc. For agricultural products as a whole, however, it

has been estimated by the United States Department of Agriculture that the railroads take only about seven per cent of the final retail prices.

From the figures presented in the diagram on page 182, some interesting inferences may be drawn. In the first place, it appears that some of the great staple commodities are marketed on relatively small spreads between producer and consumer. Some of these spreads must be surprisingly small even to people who have never placed themselves in a position to realize the difficulties confronted by wholesale dealers and retailers in the handling of perishable foodstuffs. The spreads also appear to be unusually small when compared with the costs of marketing manufactured goods. These facts are commonly overlooked by those who are able to make political capital or build up circulations for their papers by means of statements (usually made in all sincerity) that the whole marketing system is fundamentally wrong and wasteful. A disproportionate amount of attention has been given to the wide spreads on such commodities as cantaloupes, peaches, strawberries, and the like, without realizing that there are very obvious reasons why the costs of marketing these products must necessarily be very high on account of the great risks involved, and also without realizing that such commodities form a minor proportion of all farm products that are marketed. But to study gross spreads between producer and consumer gives only a superficial view of the cost of marketing; it is necessary to analyze these spreads in order to get at the really vital facts. Although marketing investigations have not progressed

far enough to permit a presentation of detailed figures for all commodities, sufficient information is at hand with regard to a few leading ones.

Cost of Marketing Creamery Butter. — The simplest and commonest method of marketing butter is from the creamery to a wholesaler in some large city, and thence direct to the retail store. There are many variations, however, especially in the largest cities. In New York, a large part of the receipts passes first into the hands of the wholesale receiver, who usually buys outright rather than handles on consignment, then to a jobber, and finally to a retailer. During the past fifteen years or so, the tendency has been for the jobber to go direct to the creamery for his butter, but a great many jobbers have had to give this up because they have found that they cannot handle successfully the fluctuating quantities at different times of year, and also because variations in quality hamper the building up of established outlets among retailers. There is a feeling that the tendency toward a unification of the receiving and jobbing trades has about spent itself in New York during recent years. It must be remembered that if the wholesale receiver does his own jobbing, *i.e.* delivers one tub at a time to hundreds of retail stores and undertakes the expense necessary for this business, he must take out a much wider margin than if he sells only to jobbers in wholesale lots on the street; in the largest cities the saving through such a combination of functions is indeed a questionable one. The channels of trade include both a receiver and jobber in Chicago, Philadelphia, Baltimore, and Boston to a certain extent, although there has been a

tendency for receivers to do their own jobbing, especially in the three latter cities. The smaller the city, the less the need of specialization between two classes of dealers, and in the cities other than those enumerated, there is usually but one set of wholesalers handling butter. Chain stores usually buy butter from the wholesale receivers, and hence take over the functions of the jobber, although one or two important ones in New York buy direct from the creameries. The United States Bureau of Labor Statistics has made a study of the prices of butter from the farmer to the city consumer.[1] The butter was made in creameries in Illinois, Iowa, Wisconsin, and Missouri, and was marketed in Chicago, Cincinnati, Cleveland, Philadelphia, and Pittsburgh. Data were collected for the months of June and December in 1904, 1910, and 1911. The butter was apparently handled by one wholesale receiver in each case. For December, 1911, the analysis presents the following results:

	Average Cents Per Pound	Per Cent of Retail Price
Received by farmer for butter fat in one pound of butter	32.97	75.9
Creamery margin	2.89	6.7
Freight	0.73	1.7
Cartage	0.03	0.1
Wholesaler's margin	1.87	4.3
Retailer's margin	4.92	11.3
Price paid by consumer	43.41	100.0
Total spread between farmer and consumer	10.44	24.1
Total spread between creamery and consumer	7.55	17.4

[1] Butter Prices from Producer to Consumer, Bulletin No. 164, U. S. Bureau of Labor Statistics.

It will be noticed from these figures that the farmer received for the butter fat contained in one pound of butter 75.9 per cent of the price finally paid for the butter by the consumer. The creamery margin is primarily a manufacturing rather than a marketing cost, and the creamery received 82.6 per cent of the price paid by the consumer, or a higher percentage than was shown for butter on page 182 above, where figures were based on butter from Minnesota creameries marketed in Minneapolis.

	Per Cent of Retail Price
Received by farmer for butter fat .	71.1
Creamery's margin	7.8
Freight	2.2
Cartage	0.1
Wholesaler's margin	4.8
Retailer's margin	14.0
	100.0

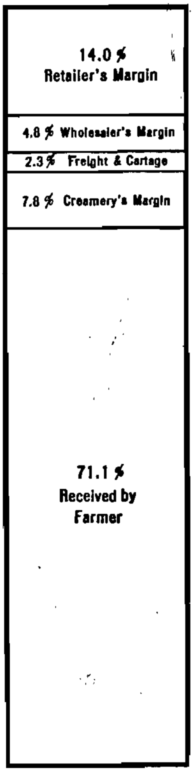

Diagram representing Proportions of Retail Price received by Various Factors in Marketing Butter.

The margins as shown by the report of the Bureau of Labor Statistics vary considerably for the different months and years, and the above statement and accompanying diagram show average proportions compiled from the figures for all the different months shown in this report.

Interesting conclusions may be drawn from these

figures. The farmer gets 71.1 per cent, and the creamery 78.9 per cent of the final retail price; freight and cartage together account for only 2.3 per cent; the retailer takes 14 per cent of the final price, which is almost exactly half of the total spread and much more than half of the purely marketing costs.

Figures compiled for Minnesota creamery butter marketed in New York City show similar results, but inasmuch as a large part of this passes through the hands of two wholesale dealers, a receiver and a jobber, the following approximate figures are of interest in this connection:

	Cents per Pound	Per Cent of Retail Price
Received by farmer for butter fat	25.0	69.4
Cost of manufacture in creamery	2.5	6.9
Freight to New York and cartage	1.5	4.2
Wholesale receiver	0.5	1.4
Jobber	1.5	4.2
Retailer	5.0	13.9
	36.0	100.0

It is not claimed that these figures are exact averages; sometimes the wholesale receiver takes more than one half cent and sometimes less, and the jobber sometimes takes two cents. But these figures are typical for large amounts of Minnesota butter. The farmer gets a slightly smaller proportion than is indicated in the figures of the Bureau of Labor Statistics, partly because of a higher transportation charge, and partly because of a slightly higher cost of marketing in New York City.

Method of Marketing Eggs. — The principal steps in marketing eggs from the farmer of the Middle West to the consumer in a large eastern city are the country store, an egg shipper or produce dealer, a city commission man or wholesaler, sometimes a cold-storage house, oftentimes a jobber, and finally the retailer. As explained in Chapter II the country merchant and the farmer pay very little attention to the quality of the eggs marketed; sometimes the country merchant candles his eggs before shipping to a dealer, but he often sends them along without grading them at all. Egg dealers who buy from these local shippers are located both in the larger cities of the Middle West and at numerous smaller towns and cities located usually at the junction of two or more railroads. These dealers send out postal card quotations to country merchants in surrounding counties, who usually receive bids in this way from a number of such dealers or from city commission men. The function of the dealer or shipper is to assemble the miscellaneous assortments of eggs, candle and repack them, and ship in carload lots to city wholesalers.

In paying the country merchant for his eggs, the dealer usually pays by the "case-count" method, *i.e.* he pays for all the eggs received, rather than make deductions for unmarketable eggs. When the dealer subtracts the bad eggs from the number to be paid for, he is using what is called the "loss-off" method.[1] Although the

[1] See Hastings, The Egg Trade of the United States, Circular No. 140, Bureau of Animal Husbandry, U. S. Department of Agriculture (1909), p. 21, and Thompson, Studies in Egg Marketing, Minnesota Experiment Station Bulletin No. 132 (1913), p. 40.

general adoption of this method would be much better for all concerned, it is making slow headway, for the following reasons: even though the grading may be honest, the country merchant is likely to be dissatisfied with the deductions made by the dealer, who practically has it in his power to set the price that he pays for eggs by making his grading liberal or severe as he sees fit. The country merchant therefore prefers the case-count method, and competition between dealers for shipments has had a tendency to perpetuate the old system, which is primitive and wasteful in that it takes no regard of quality and offers no inducement for farmers to take proper care of their eggs or for country merchants to insist that farmers bring in only good eggs. Fortunately, the loss-off method is gaining ground, and a great improvement in quality of eggs marketed has been noticeable during the past few years.

Obviously, the shipping of poor eggs from country points adds to the cost of marketing and tends to widen the spread between farm price and consumer's price. Dealers necessarily have to take into account the losses from unmarketable eggs in setting the price to the rural shipper. Although there has been a gradual improvement, as noted above, yet the waste from marketing bad eggs is enormous. In 1909 investigations of the United States Department of Agriculture estimated that 17 per cent of the eggs shipped from country points in the Mississippi Valley region were defective.[1] In 1913, Professor Thompson of the University of Minne-

[1] This 17 per cent was made up as follows (Hastings, The Egg Trade of the United States, p. 16):

sota found that the eggs in three shipments graded as follows:[1] "firsts," 75.3 per cent; "seconds," 12.2 per cent; "cracks," 6.5 per cent; "rots," 6 per cent. These facts do not apply to eggs marketed by farmers who make a business of poultry raising, but the great bulk of eggs shipped to the large cities of the country are raised by farmers who raise poultry merely as a side line, and who give practically no attention to this phase of their business. Eggs are not only peculiarly susceptible to this carelessness in raising and handling, but they are both extremely fragile and perishable, facts which play an important part in the cost of marketing.

The country produce dealer described above ships his eggs in car lots to wholesalers or commission men in large cities. Formerly, eggs were handled largely on commission, but the tendency has been for receivers to buy outright, often consummating their purchases from country car-lot shippers by wire. The receivers re-candle the eggs, divide them up into numerous grades, and repack them, and in the smaller cities sell direct to retail stores; in the largest cities, they sell to jobbers

	Per Cent
Dirties	2
Breakage	2
Chick development	5
Shrunken or held eggs	5
Rotten eggs	2½
Moldy and bad flavored	½
Total	17

[1] Studies in Egg Marketing, p. 18.

who perform the difficult task of establishing the innumerable small channels of trade to the retailers, much as in the butter trade. A large part of the receipts from March to August necessarily has to be held in cold storage for consumption during the season of scarcity. Although there are many variations, the method of marketing described above is typical of vast quantities of eggs, especially western eggs marketed in eastern cities, and furnishes a good basis for examining the cost of marketing.

Cost of Marketing Eggs. — The cost of marketing a dozen eggs from a point in Iowa to the consumer in New York City has been summarized as follows:[1]

	Cents
Paid the farmer in Iowa	15
Profit of country store	0
Gross profit of shipper	$\frac{3}{4}$
Freight to New York	$1\frac{1}{2}$
Gross profit of receiver	$\frac{1}{2}$
Gross profit of jobber	$1\frac{1}{4}$
Loss from candling	2
Gross profit to retailer	4
Price to consumer	25

In this case, the country storekeeper is given no profit, because he usually sells to the produce dealer for the same price that he pays to the farmer in trade, taking his profit on the goods exchanged. The gross spread is ten cents, of which the retail store takes four cents. The proportion of retail price received by the

[1] Hastings, The Egg Trade of the United States, p. 23.

farmer is sixty per cent. It is significant that one fifth of the total spread is accounted for by loss in candling.

The report of the New York State Food Commission [1] gives the following analysis of costs of marketing a dozen eggs based on a price of twenty cents paid to the farmer, and assuming that they were held in storage.

Producer's price	$0.20	$0.20
Shipper's charges:		
(*a*) Labor in collecting and packing	.005	
(*b*) Cases, fillers, and packing	.0073	
(*c*) Transportation charges to city	.0106	.023
Commission for handling	.01	.01
Jobber's charges:		
(*a*) Cartage from dock to store	.00133	
(*b*) Candling and grading	.00666	
(*c*) Storage and insurance	.016	
(*d*) Jobber's profit and charges	.01	
(*e*) Delivery to the retailer	.004	.038
Retailer's charges:		
(*a*) Operating expenses, 10 %	.0271	
(*b*) Retailer's profit, 5 %	.01497	.042
Price paid by consumer		$0.313

In this case, the total spread (including cost of storage) was 11.3 cents, of which 4.2 cents was taken by the retailer. The farmer in this case received 63.9 per cent of the final price. The New York report also shows that the margin between price paid by wholesaler and price paid by consumer is greater than it is on "state and near-by" eggs and on "Fancy white Leghorn" eggs. In view of the carelessness of marketing at country

[1] P. 59. The report does not indicate the origin of the shipment, nor does it describe the methods of marketing in New York City.

points, the fragility and the perishability of eggs, and the amount of handling necessary, it appears that eggs are marketed on extremely small margins. This does not take into account the dishonest retailer who takes the same batch of storage eggs, divides them into three lots, and marks them 30 cents, 40 cents, and 50 cents a dozen respectively, with a placard "strictly fresh" on the last lot, as discovered by Mrs. Julian Heath in New York City.

CHAPTER X

THE COST OF MARKETING — CONTINUED

Methods of Marketing Live Stock. — The relation between the price of a thirty-cent steak and the price of six cents received by the farmer for his steer is difficult for the layman to understand, and it is commonly believed that there must be an unnecessary loss or an abnormal profit which is responsible for the wide spread. The fact that the packing industry is concentrated into relatively few hands accentuates this feeling. Since live stock is such an important source of revenue from the standpoint of farmers, and meat such an important item in the average family budget, an understanding of the methods and costs of marketing is of special importance. First, we shall describe briefly the methods.

Beginning at the country shipping point, the farmer may market his stock in any one of five ways:[1] First, he may kill and dress it himself and sell direct to consumers or country stores; second, he may sell his animals to local butchers; third, he may ship his own stock to some primary market; fourth, he may sell to a local

[1] The following description is based primarily on a study made by K. F. Warner under the direction of the author, and published in Studies in the Marketing of Farm Products, University of Minnesota. The data apply principally to conditions in Minnesota, but are fairly typical of marketing conditions in the rest of the country.

stock buyer or shipper; or fifth, he may ship with his neighbors through a coöperative shipping association. Home dressing and curing of meats is largely impracticable because but few farmers have the necessary equipment or training or sanitary conveniences to compete with the large packing establishments. Nevertheless, a certain quantity of pork products is marketed through country stores to village consumers in this way. Selling stock to local butcher shops is entirely satisfactory as far as it goes, but the supply of a producing region largely exceeds local requirements, and hence outside markets must be found.

The farmer's problem in marketing his live stock is to find the cheapest way of getting it to an organized market and into the hands of the packer. The principal primary markets are in the Central states and in the Southwest, at Chicago, Sioux City, South Omaha, South St. Paul, Kansas City, Fort Worth, etc., and the large packers have plants located at these points. If the stock raiser has enough stock to market at one time to fill a car, it is a satisfactory method for him to ship direct, rather than through the hands of a local middleman; in states like Iowa where stock raising is carried on extensively, cattle and hogs are very commonly marketed in this way. If stock raising is merely a side line in any community, so that farmers have only a few head to market at a time, it does not pay to ship direct, and hence they must sell to local buyers or through a shipping association. Local cattle buyers are much in evidence in all stock-raising communities, and perform a useful service; there are often four or five located at a

single shipping point, and when competition is keen and farmers know the market value of their product, they can often sell to as good advantage through them as by taking the risk and time and trouble of shipping direct, even when they have a carload. Certain expenses and abuses incident to the operations of local cattle buyers are eliminated, however, by the coöperative shipping association, and at least in those sections of the country where but few farmers can ship individually in car lots, this is undoubtedly the most efficient method of marketing at local points.

Live stock passes from local shipping points to the great primary markets in special trains made up of stock cars, and are there unloaded and driven into pens. The stockyards are owned by separate corporations, the capital stock of which is usually controlled by one or more of the large packers, and certain charges are levied for yardage, feeding, etc. The stock itself first passes into the hands of commission men who act as expert salesmen for the country shippers, and who sell direct to the packers that have plants at the yards, or to buyers representing packers in other markets, or to shippers who buy up for shipment to other markets, or to scalpers or dealers who buy for resale in the same market. The last-named class usually handles thin stock that is not ready for slaughter, and which is bought by or for farmers who wish to fatten it for market. The great bulk of the receipts of fat stock arriving in any one market is sold directly by the commission men to local packers for immediate slaughter. The packers maintain large and well-equipped plants, and their methods of opera-

tion through subdivision of processes offer one of the best illustrations of the economies resulting from minute division of labor and utilization of by-products. The dressed carcasses are shipped all over the country in refrigerator cars, which often travel at high rates of speed, and are marketed by the packers principally through their own distributing houses, located in all the important cities in the country, direct to retail butchers. The local distributing houses are fitted with "coolers," where the local butchers usually come to make their selections, and where the carcasses are allowed to remain and "ripen" until in the best condition to be taken to the retail shops for sale to consumers.

Cost of Marketing Live Stock and Meat. — So much for a brief description of marketing live stock; now let us look at the costs. In marketing live animals from country point to packer at primary market freight is by far the most important single item, and this of course varies with distance. Shrinkage must also be taken into account. When sold through a local buyer, the farmer usually gets from 50 cents to $1.00 per 100 pounds under primary market price, and out of this margin must come remuneration for the cattle buyer, freight, yardage, feeding, and commission charges. When marketing through a shipping association, the total expense usually amounts to between 30 and 40 cents, including freight of perhaps 12 to 18 cents, expenses of the association from 6 to 10 cents, and the remainder to cover switching, yardage, feeding, and commission charges, and also shrinkage. The commission charges are very low — less than 1 per cent of the selling value.

When a farmer ships independently, his expenses are similar to the above, except for the 6 to 10 cents for operating expenses of the association. These figures apply roughly to stock raisers located within 200 or 300 miles of primary markets; shippers in Montana or Idaho to eastern markets would have a higher expense. On a thousand-pound steer raised in Minnesota, Iowa, Nebraska, or similarly located states, and worth say $70, the approximate average cost of marketing from shipping point to packer would be in the neighborhood of $4 or $5.

The Part Played by the Packer. — The principal element in the gross spread between farm price of stock and retail price of meat is due to the fact that the carcass of the slaughtered animal constitutes such a relatively small proportion of the weight of the live animal. Although better results are obtained for high-grade animals, the average weight of beef carcasses slaughtered at South St. Paul, one of the large markets of the country, is only 51 per cent of the live weight; in other words, the "dressing per cent" is 51. For hogs it is 77, and for sheep 47. It is apparent that the original cost of the live steer of say 1000 pounds must be distributed over only 510 pounds of meat, except for the returns from by-products which come out of the other 490 pounds. But these by-products are of much smaller value than the carcass. As a matter of fact, it has been found that in 1913, the average price paid for a thousand-pound steer at South St. Paul was $62.50; that the packer sold the carcass for $58.65, or less than he paid for the live animal, and the by-products for $15.06, or a total of $73.71, yielding the packer a gross margin of $11.21, out of which

he had to pay for maintenance and operation of packing plant, freight to distributing points, and maintenance and operation of branch houses.

It is difficult to say just what proportion of this $11.21 was taken up by packer's expenses and how much he was able to retain as profit, but Swift and Company in its annual report for 1912 gives the following analysis of one dollar in sales:

For live stock	$0.80
For labor	.08
For freight	.05
For other expenses	.04
For profit	.03
	$1.00

If these figures are correct, the packing plant retains only about 34 cents as net profit out of its total margin of $11.21 on a thousand-pound steer. This profit would amount to about 7 cents per 100 pounds of meat, or to less than one tenth of a cent a pound! Possibly these figures are too low; the United States Bureau of Corporations in its report on the beef industry in 1905 [1] found that the average profit of three of the largest packers in the country was 13.1 cents per hundred pounds of dressed meat in 1902–03 and 13.5 cents for 1903–04, or a little over one tenth of a cent per pound. These computations are all based on the value of crude by-products and do not take into account the profits derived from manufacturing these by-products into a thousand and one useful commodities. Even when these profits are included, the Bureau of Corporations

[1] P. XXX of the Summary.

found that the average net profit of the packers was not over 25 cents per 100 pounds of dressed beef, or one fourth of a cent per pound. From these figures it is perfectly safe to conclude that the net profit per pound of beef taken by the packer is an unimportant item of the spread between producer and consumer, and that he makes his return on capital invested by doing an enormous volume of business.

The Retail Butcher. — It has been shown above from computations made in Minnesota that in 1913 the packer at South St. Paul paid on the average $62.50 for a thousand-pound steer, and that he sold the carcass to the retail butcher for an average of $58.65. It remains now to see how much the retailer sold this carcass for to consumers. In the first place the meat from different parts of the carcass varies in quality, and the quantity of each quality constitutes a different proportion of the whole. If the same price were to be charged for all cuts, every one would want the loins and ribs, and the stewing cuts would go begging. The demand for the better cuts, together with their relative scarcity, causes them to have a high value, and the problem of the retail butcher is to place different prices on the different cuts in such a way that the average price received for the whole carcass will yield sufficient revenue to pay the packer for the meat and to cover operating expenses of the store. The following table shows the various cuts of beef, pork, and mutton, the per cent that each is of the total weight, and the average price charged by retail butchers for each cut in Minneapolis and St. Paul in 1913:

Approximate Average Retail Prices of Beef, Pork, and Mutton in Minneapolis and St. Paul, 1913, and the Proportion that Each Constitutes of the Total Weight of Carcass

Beef

Cut	Price	Per Cent of Total Weight	Retail Price on Basis of 100 Lbs.
Rib	$0.19	9.5	$ 1.81
Loin	.26	17.5	4.55
Round	.20	24.0	4.80
Chuck	.15	22.0	3.30
Plate	.10	13.0	1.30
Flank and shank	.07	9.0	.63
Suet	.04	3.0	.12
Waste	—	2.0	—
Total	—	100.0	$16.51

Pork

Cut	Price	Per Cent of Total Weight	Retail Price on Basis of 100 Lbs.
Chops	$0.19	12.0	$ 2.28
Shoulder	.14½	8.0	1.16
Butts	.17	6.0	1.02
Spare ribs	.13	2.0	.26
Ham	.19½	21.0	4.10
Bacon	.21	21.0	4.41
Lard	.12	12.0	1.44
Neck, bone, feet, etc.	.04	4.0	.16
Trimmings	.11	13.0	1.43
Waste	—	1.0	—
Total	—	100.0	$16.26

Mutton

Cut	Price	Per Cent of Total Weight	Retail Price on Basis of 100 Lbs.
Legs	$0.18	31.0	$5.58
Shoulder	.14	16.0	2.24
Chops	.23	30.0	6.90
Stew	.08	18.0	1.44
Waste	—	5.0	—
Total	—	100.0	$16.16

It will be observed that in the case of the beef carcass, the rib, loin, and round, the three best cuts, constitute only 51 per cent of the total weight. In spite of the relatively high prices charged for these cuts, the average price for the whole carcass was but 16.5 cents. The average price paid for the whole carcass was 11.5 cents, or to return to the thousand-pound-steer basis, the retailer paid $58.65 for the carcass, and sold it for $84.20 to the consumer, a gross margin of $25.55, or 30.3 per cent of the selling price. Reports secured from retail butcher shops in the Twin Cities indicate that the cost of doing business is about 24 or 25 per cent of gross sales (including proprietor's salary), as compared with the 30.3 per cent margin on beef, a margin of 23.2 per cent on hog products, and one of 26.5 per cent on mutton. Surely the retail butcher is not making a fortune, and yet the margin that he takes out is far and away the largest slice taken out in the marketing chain. The costs of retailing are high; expenses for delivery alone constitute about one sixth of the total.

Summarizing the preceding figures for a thousand-pound steer, it will be seen that the final receipts were $84.20, paid by consumers for meat, and $15.06, received by the packers for by-products, a total of $99.26. The farmer originally received from $57 to $58 for the steer, or say practically 57 per cent of the final price of the products from his steer. The proportion is about the same for hogs and sheep. The following table gives a detailed summary for these three animals:

	1000-Pound Steer	230-Pound Hog	80-Pound Sheep
Received by farmer	$57.50	$17.50	$4.25
Paid by packer	62.50	18.63	4.80
Received by packer:			
for carcass	58.65	22.13	4.47
for by-products	15.06	1.09	1.20
Paid by consumer for meat	84.20	28.80	6.08
Total receipts — meat at retail plus by-products	99.26	29.89	7.28
Proportion received by farmer . . .	57.9 %	58.5 %	58.7 %

The Marketing of Grain. — The marketing of grain at country points has been described in Chapter II, and numerous other features of grain marketing are discussed in other places. A brief résumé of the methods by which the bulk of the grain crop of the principal grain-raising states east of the Rocky Mountains is moved serves as a basis for studying marketing costs. In the first place, grain is handled in bulk, and is first sold by the farmer to the local elevator; the local elevator either consigns to a commission man in some primary market, or sells "on track" or "to arrive" to some dealer. Whichever method of sale is adopted, the spread between farm price and primary market price is practically the same, and it is convenient to consider that the commission method is used, which, as a matter of fact, is by far the commonest way in territory tributary to Minneapolis and Duluth. On reaching market, the grain is inspected and graded and a sample is displayed on the trading floor of the grain exchange by the commission man, who sells direct to a local miller, or maltster, or

to a terminal elevator company, or to a shipper or exporter. If sold to a terminal elevator, it goes into storage, and comes out either in fulfillment of a contract for future delivery or to be sold as cash grain to millers or shippers. If bought by a shipper, it is sent on to other markets, and possibly to foreign countries.

Cost of Marketing Grain. — It has already been shown that the actual cost of handling through a country elevator varies from a little over one cent to nearly two and a half cents per bushel, depending on the quantity of grain handled. The margin allowed by the country elevator must be large enough to cover this operating cost and to make a profit besides. The freight rate from shipping point to primary market is by far the most important element of marketing cost, and this of course varies for different distances. There is a small charge for inspection (fifteen cents per car in Minneapolis and fifty cents in Kansas City) and also a weighing fee (forty cents per car in Minneapolis), and then there is the commission charge of one cent a bushel on wheat, rye, and barley, three fourths of a cent on corn, and one half cent on oats.

The price of grain paid to the farmer at any country point is roughly the price at primary market to which shipping point is tributary minus the cost of transportation and handling as described above. At a point 200 miles from Minneapolis, for example, the freight rate is 5.8 cents per bushel on wheat, and the margin allowed to cover cost of operating the local elevator, inspection, weighing, and commission charges, is 4.2 cents, making a total difference of 10 cents. In other

words, when the flour mill in Minneapolis pays $1 a bushel for wheat, the farmer located 200 miles away receives 90 cents, or 90 per cent of the price paid by the miller. As for oats, the freight rate for the same distance is 3 cents, and the margin allowed for operation of elevator and other expenses is also 3 cents, making a total difference of 6 cents between Minneapolis price and price paid to farmer. If oats are 36 cents a bushel in Minneapolis, the farmer receives in this case 83⅓ per cent.

An organization in Minneapolis sends out daily postal-card quotations to all country points in the Minneapolis territory, showing the prices that may be paid at each point for different grades of each kind of grain, and the margin at each point is determined as indicated above. Since country prices are expressed in full cents (fractions omitted) and since the freight rate from each point to Minneapolis usually figures out to a fraction of a cent, the margin allowed to cover elevator costs and incidental charges varies within a cent, so as to make the resulting price a whole number. The margins allowed for barley are larger than for wheat and oats, because there is more risk in handling this grain; it cannot be graded so closely as wheat and there is no future trading, and hence the elevator cannot protect itself against price fluctuations by hedging, as explained in Chapter XVI. The following table shows for wheat, barley, and oats the freight rates from eight points at intervals of approximately 100 miles from Minneapolis, the margins allowed to cover expenses, and the gross difference between Minneapolis and country price, this difference indicating

the cost of marketing from the point of delivery of grain by the farmer at the country elevator to the point where the grain is bought on the floor of the grain exchange:

FREIGHT RATES TO MINNEAPOLIS AND MARGINS ALLOWED IN DETERMINING LOCAL PRICES FOR WHEAT, BARLEY, AND OATS AT EIGHT STATIONS AT INTERVALS OF APPROXIMATELY 100 MILES FROM MINNEAPOLIS

	NUMBER OF MILES FROM MINNEAPOLIS							
	102	200	300	403	503	607	696	781
	(cts.)	(cts.)	(cts.)	(cts.)	(cts.)	(cts.)	(cts.)	(cts.)
Wheat:								
Freight rate per bushel	4.6	5.8	7.8	9.6	10.8	12.3	13.5	15.0
Margin allowed	3.4	4.2	4.2	3.4	4.2	3.7	3.5	4.0
Total under Mpls. price	8.0	10.0	12.0	13.0	15.0	16.0	17.0	19.0
Barley:								
Freight rate per bushel	3.7	4.6	6.2	7.7	8.6	9.8	10.8	12.0
Margin allowed	5.3	5.4	5.8	5.3	5.4	5.2	5.2	6.0
Total under Mpls. price	9.0	10.0	12.0	13.0	14.0	15.0	16.0	18.0
Oats:								
Freight rate per bushel	2.4	3.0	4.2	5.1	5.8	6.5	7.2	8.0
Margin allowed	3.6	3.0	2.8	2.9	3.2	3.5	2.8	3.0
Total under Mpls. price	6.0	6.0	7.0	8.0	9.0	10.0	10.0	11.0

It will be noticed from this table that the gross margins on barley are about the same as on wheat; the freight rates per bushel are lower, however, whereas the margin to cover elevator and other expenses is higher. The value of barley per bushel averages much lower than that of wheat, so that the marketing costs constitute a larger proportion of the Minneapolis price for the former than for the latter.

The cost of marketing wheat from local shipping

point in Kansas to Philadelphia via Kansas City, Mo., is shown by the following figures :[1]

	CENTS PER BUSHEL
Price received by farmer in Kansas	87.0
Margin taken by country elevator	3.0
Freight rate to Kansas City	6.2
Inspection, weighing, and interest on draft	.25
Commission	1.0
Price paid by shipper in Kansas City	97.45
Freight rate, Kansas City to Philadelphia	15.6
Mixing in Kansas City elevator	.25
Exchange	.20
Overhead expense of shipper	.375
Net profit of shipper	.625
Price, delivered in Philadelphia	114.500

Cost of Exporting Wheat. — Much of the wheat raised in the United States is exported to foreign countries, and ordinarily the price of wheat at any place in the United States is approximately the price at Liverpool, the principal market of the great wheat-importing countries, minus the cost of marketing from such point to Liverpool. Wheat exported from the American Northwest east of the Rockies passes largely through Duluth and down the Great Lakes; from points west of the Rockies it moves by long ocean haul from Pacific ports; and from Kansas it moves largely by way of Gulf ports. The spread between farm price in Kansas and price delivered in Liverpool is indicated by the following analysis made in September, 1914 :[2]

[1] Kerr and Weld, Prices of Wheat in Kansas City, etc., House Document 1271, 63d Congress, 3d Session, p. 27.

[2] *Ibid.*

	Cents per Bushel
Price received by farmer in Kansas	87.0
Margin taken by country elevator	3.0
Price paid country elevator by shipper	90.0
Freight rate, point in Kansas to Galveston	15.0
Inspection and weighing at Galveston	.25
Gross profit of shipper	1.25
	106.50
Cost of elevation, loading into boat, etc.	1.25
Freight, Galveston to Liverpool	6.0
Insurance, etc., in transit	.75
Overhead expenses of exporter	1.0
Net profit of exporter	1.25
Price, delivered at Liverpool	116.75

From this analysis it is seen that the total spread between the Kansas farm and Liverpool is approximately 30 cents, and that railroad and ocean freight together account for 21 cents, or 70 per cent of the total. Studies made in 1910 showed that on wheat exported from the Pacific Northwest the average spread between Portland, Oregon, and Liverpool was about 23 or 24 cents, whereas the difference between Portland price and country prices varied from about 5 to about 17 cents per bushel, depending on distance from the coast.[1] The ocean freight rate from Portland to Liverpool is much lower than the rail rate from Portland to Chicago.

Relation between Wheat and Flour Prices. — The United States Bureau of Labor Statistics has made a study of marketing wheat in Kansas, carrying it through into the form of flour as sold to final consumers. The

[1] Andrews, Marketing Grain and Live Stock in the Pacific Coast Region, Bulletin 89, Bureau of Statistics, U. S. Department of Agriculture, p. 53.

following table indicates the price paid to farmers at certain points in Kansas in March, 1911, for a bushel of wheat, and the values of the various products that were made out of the bushel of wheat in the flour mill:[1]

Average price paid farmers for wheat	$ .792
Value of products from bushel of wheat:	
Retail price of 34.84 lb. 80 % patent flour	.986
Wholesale price 7.85 lb. "clear" flour in Kansas City	.125
Wholesale price .87 lb. "low-grade" flour in Kansas City	.011
Wholesale price 9.33 lb. bran at mill	.088
Wholesale price 6.22 lb. shorts at mill	.063
Total products from bushel of wheat	$1.27

By computing an average from such analyses as these it is found that the farmer receives about 64 per cent of the price of products made out of his bushel of wheat. The same bulletin shows the wholesale value of enough flour to make a loaf of bread; it varies from 1.1 cents to 1.4 cents.[2] Although the use of bakers' bread has been increasing while home-baking has been decreasing, the housewife of course always has the privilege of buying flour and performing the manufacturing process of baking bread herself.

Cost of Marketing California Oranges. — The bulk of California's citrus fruit is marketed through the California Fruit Growers' Exchange, and Mr. G. Harold Powell, general manager of the exchange, has given out an interesting analysis of the marketing costs from California grower to eastern consumer.[3] The fruit after leaving the packing house in California and being trans-

[1] Wheat and Flour Prices from Farmer to Consumer, Bulletin No. 130, U. S. Bureau of Labor Statistics, p. 9.

[2] P. 69.

[3] An address delivered by Mr. Powell before the Western Fruit Jobbers' Association at Los Angeles, February, 1915, and published in *The Western Fruit Jobber* (Denver, Colo.), April, 1915.

ported across the country in refrigerator cars passes into the hands of representatives of the exchange, who are located in all the principal markets of the country. In most cities, these representatives sell to jobbers in wholesale lots, who in turn sell a box at a time delivered to retailers within the city, or ship to retailers in near-by towns. In some of the largest cities the representatives turn the shipments over to auction companies to steer them into the hands of jobbers, or in some cases of large retailers or chain stores. In the following statement appear the percentages of final retail price going to the different factors involved, as given out by Mr. Powell, and also these percentages worked out in cents per dozen, based on an assumed price of forty cents a dozen paid by the eastern consumer:

Cost per Dozen of Marketing California Oranges in Eastern Markets Based on an Assumed Retail Price of 40 Cents per Dozen

	Cents per Dozen	Per Cent of Total
Grower receives	10.7	26.7
Picking and hauling to packing house	1.0	2.4
Packing house cost	2.9	7.4
Freight and refrigeration	8.2	20.5
Grower's Selling cost	0.6	1.5
Jobber's margin	3.3	8.2
Retailer's margin	13.3	33.3
	40.0	100.0
Farmer receives gross (including expense of picking and hauling)	11.7	29.1
Total marketing cost (including packing house cost)	28.3	70.9
Proportion that retailer's margin is of total marketing cost	—	47

These figures, which are of particular interest, are averages compiled by the California Fruit Growers' Exchange from over 5000 reports obtained from representatives in 30 representative markets. To make them comparable with marketing costs of other commodities, the cost of picking and hauling should be included with farmer's return, making 29.1 per cent of retail price received by him. The transportation company takes nearly as much as the grower (possibly it really costs nearly as much to haul a box of oranges 3000 miles under ice as it does to grow them in the first place). Most significant of all is the fact that the retailer takes not only a larger slice than any other marketing agency, but more even than the grower himself. And yet the $33\frac{1}{3}$ per cent of final price taken by retail fruit dealer is not only smaller than the margin taken by retailers on cantaloupes, lettuce, and other perishables, but it compares favorably with the margins taken by department stores on clothing, and men's and women's furnishings, not to mention ladies' millinery! It is not to be inferred from this remark that there is no hope of reducing the retailer's margin; large stores in the great cities often buy a carload at a time and sell on smaller margins, but it is safe to say that the splendid organization and methods of the California Fruit Growers' Exchange, through standardization of grades and packages and careful supervision of the whole marketing system, have made it possible for retailers in general to take out smaller margins than would otherwise be the case.

The investigation also revealed the fact that there

is a great variation in margins taken by retailers and jobbers in different cities and in different parts of the country. Mr. Powell's own words are worth quoting in this connection, especially as they throw light on some of the factors affecting the cost of marketing in general:

"A considerable variation has been found in the proportion of the consumer's dollar that goes to the jobber and retailer in different parts of the country. West of the Rockies and in Canada, for example, the jobbers' costs are higher than in the East or in the Mississippi Valley, on account of higher labor costs, higher rents, higher interest and larger geographical distances to be covered by the traveling salesmen of the jobbers. These costs are reduced in the older, more densely populated parts of the country, where interest rates are lower and where the various costs of distribution are more economically accomplished. The jobbing costs of the eastern half of the United States are often not more than one half the corresponding costs in the West.

"There is an equally wide variation in the distributing margins in different cities, sometimes due to the efficiency of the men engaged in the jobbing business, sometimes to natural local conditions, and sometimes to understandings between different jobbers through which a minimum margin is established. The record shows that in one city the average mark-up of the jobbers is approximately 10 per cent. There is the most active competition there, turnovers are quick, the margin on each transaction is small and the per capita consumption is high. In another city in one of the richest, most fertile states, where a few friendly jobbers work together, buying cars of fruit jointly and selling at a high margin on each turnover, the average mark-up for the year is 22 per cent. The consumption there is restricted, sales are slow, and the business is transacted on an artificial competitive basis.

"There is apparently a considerable variation in the margins, due to the number of times a jobber or a retailer turns over his

capital. Quick sales at a small margin of profit is the policy usually followed by those who specialize in the citrus fruit business. They make their annual profit on a large, steady volume of business. They attract the consumer with fruit that is always fresh, attractively displayed and at reasonable prices. They stimulate consumption by advertising and in other ways. Others, especially among the country retailers, or among jobbers who carry citrus fruits as a side line, do not specialize or push sales. Their losses from decay and off condition are large and their margin on each turnover must necessarily be large to protect themselves against fluctuation in prices. These dealers are not important factors in increasing the per capita consumption. The margins charged by the retailer may run as high as 75 per cent above the cost in some cities, while in others it drops as low as 20 per cent."

The Cost of Marketing Poultry. — The spread between producer's price and consumer's price is wide for poultry; Minneapolis figures indicate that the farmer gets only forty-five per cent of final price. Poultry is marketed partly through country stores, partly by outright sale to cash buyers, and largely by direct shipment in coops by farmers to wholesale dealers and commission men. Except for the Jewish trade, which requires the shipment of great quantities of live poultry in specially equipped cars, western poultry is usually dressed before it is sent to eastern markets by the wholesale dealers and cash buyers in the larger cities and towns. The birds as they come from farmers are of various sizes and breeds, and the western houses carefully sort them out, and pack them in boxes — usually a dozen in a box. In the largest eastern cities they frequently pass through the hands first of a wholesale receiver and then of a jobber, although sometimes, and especially in the smaller

cities, only one wholesale middleman is necessary. Since a large proportion of the year's supply reaches market during two or three months in the fall, great quantities of poultry have to be held in cold storage for a considerable length of time.

A study made of the increments of cost in marketing Minnesota chickens in Minneapolis, assuming that they remain in storage for three months, gave the following results:[1]

		Cents per pound	
Net to producer			9.1
Transportation		1.4	
Cost to wholesaler			10.5
Feeding		0.25	
Killing:			
Loss in shrinkage	1.0		
Labor and expense	0.75	1.75	
Packing		0.5	
Storage, interest, and insurance		1.1	
Wholesaler's gross margin (includes overhead and delivery costs and profits)		1.9	
Price to retailer			16.0
Retailer's gross margin		4.0	
Price to consumer			20.0

The 9.1 cents received by the farmer constitutes 45.5 per cent of the final retail price. Again it is seen that the retailer takes the largest slice, or 36.7 per cent of the total spread, but there are other and unusual costs in the marketing of this product, notably the labor and expense and shrinkage in killing and dressing, — which is really a manufacturing rather than a marketing cost. These expenses account for 1.75 cents out of a total spread of 10.9 cents, or practically one sixth. It should also be noted that packing and feeding also have to be taken

[1] Thompson, S. H., in Studies in Marketing of Farm Products, (Weld and others), p. 72.

into account, and also that the cold-storage charges are included in the spread.

The Cost of Marketing Cheese. — Among the few scientific analyses of marketing costs and methods that have been made is that of the University of Wisconsin with regard to cheese produced in that state. The local factories sell most of their output to wholesale dealers who have warehouses scattered through the cheese-producing regions, and sales are made partly on the dairy boards (of which there were 12 in Wisconsin in 1912), but mostly by private sale. The dealers sell largely to wholesale grocers in different parts of the country, although the Chicago packers have been entering more and more as factors in cheese marketing. The Wisconsin bulletin on this subject says:[1] "There are usually three middlemen and the transportation agencies who handle the cheese before it comes to the consumer. Of the total middlemen's charges from $\frac{3}{4}$ to $1\frac{1}{2}$ cents go to the dealer, $\frac{1}{4}$ to 3 cents to the wholesale grocer, 3 to 5 cents to the retail grocer, and about $\frac{1}{4}$ to $2\frac{1}{2}$ cents go for railroad freights." It is also stated that "The price varies about 5 cents between the summer and winter months; cheese costing 11 to 13 cents on the boards will sell for about 20 to 23 cents in the retail stores of the South and West in summer, and in winter for about 25 to 30 cents."

If we assume that the factory receives 12 cents per pound, and that the dealer takes $1\frac{1}{4}$ cents, the railroad

[1] Taylor, Schoenfeld, and Wehrwein, The Marketing of Wisconsin Cheese, Wisconsin Experiment Station, Bulletin No. 231, p. 30. A later bulletin on this subject was issued in 1915.

1½, the wholesale grocer 1¾, and the retailer 4½, the final price would be 21 cents, the factory receiving 57 per cent. To determine the price received by the farmer, the cost of manufacture in the cheese factory would have to be subtracted from the 12 cents paid to the factory. These figures may not be exactly typical, but they are nearly enough correct to indicate at least roughly the relative importance of the margins taken out by the successive middlemen. The retailer's margin in this case is 44 per cent of the total spread between cheese factory and final consumer.

Conclusions Concerning Cost of Marketing. — Although it is impossible to determine exactly the average proportion of retail prices received by farmers for all their products, it has been shown that the figures commonly circulated as representing this proportion are most of them far from accurate. The fact that so many people have come to believe that the farmer gets only 35 per cent is most unfortunate; it has led to exaggerated notions about the inefficiency of the marketing system and to an unfounded belief that there must be some simple and perhaps revolutionary method of effecting a quick and radical reduction in the spread between farmer and consumer. Little help in solving the marketing problem can be expected from people who hold such radical views. The popular misconception with regard to marketing is based on a lack of knowledge of marketing methods and a lack of appreciation of the difficulties encountered and the functions performed by middlemen.

It has also been shown that even if an accurate

average proportion of retail prices received by farmers could be determined, it would still be misleading, because it gives no idea of the great variation in costs of marketing different commodities. Examples of these variations have been given in the preceding chapter, and factors affecting the cost of marketing have been enumerated. Analyses have also been made of the costs of marketing various commodities, and from these figures certain important conclusions may be drawn, as follows:

1. For most commodities, the cost of railroad transportation plays a relatively unimportant part. It has been estimated by representatives of the United States Department of Agriculture that freight rates constitute on the average about seven per cent of the retail prices. For some commodities, like California fruit or cantaloupes, the freight rate is an extremely important item, but for most staple commodities, distance from market has relatively little effect on final retail prices, and transportation costs would have to be reduced much more radically than can ever be the case, to appreciably affect retail prices. This does not mean that there are no important transportation problems connected with marketing. There are still questions with regard to relative rates on different commodities and between different places, refrigerator car service and icing charges, demurrage, settlement of claims, etc., which are still bothering the trades, but for the most part these problems are of interest mainly to wholesalers and shippers who are handling commodities on extremely small margins and to whom a difference of a small fraction of a cent

per unit of goods is sometimes of the utmost importance. The solution of these problems will have no appreciable effect on the total cost of marketing or on the prices paid by consumers.

2. The wholesalers in the large cities are responsible for a smaller increment of the spread than is commonly believed. It is perhaps safe to say that the wholesale trades take between five and ten per cent of final retail prices of commodities that go through to consumers without change by manufacturing process. On great staple commodities, like butter and eggs, the margins are often remarkably small. In fact, wholesalers take such small margins on the whole, and such a small increment of these margins is represented by clear profit, that it is only on an enormous volume of business that this class of middlemen can make profits commensurate with those expected in other lines of business involving similar risks, capital outlay, ability, and length of working hours. The high degree of efficiency attained by the wholesale trades in our large cities under adverse conditions deserves high praise.

3. By far the most expensive step in the marketing process is the retail store. Attention has been called to specific instances of this in preceding paragraphs. From numerous instances of costs of marketing different commodities cited in Carver's *Rural Economics* it has been roughly computed that on the average the retailer takes about 47 per cent of the spread between farmer and consumer. In other words, the retail store takes a slice nearly as large as the slices taken by country shipper, transportation company, and wholesaler and jobber

combined! The marketing problem is largely a problem of retail merchandising. And yet the wide margin taken by retailers is not due to any greater profits accruing to that class of middlemen; rather is it due to the high expenses of retailing.

CHAPTER XI

TRANSPORTATION AS A FACTOR IN MARKETING

Relation of Marketing System to Railroads. — The whole modern organization of marketing is largely an outgrowth of the development of transportation facilities, whereby commodities are carried in large quantities from regions where natural conditions favor their production to regions of dense population. Except for commodities that could be brought by water, cities were formerly largely dependent on the surrounding neighborhood. It has been pointed out that the locations of the wholesale districts of many of our large cities were originally selected so as to be near harbor or river, and that this has turned out to be a disadvantage in those instances where railroad terminals are not also conveniently located. It is needless to dwell on the effect that railroads have had in widening the market for agricultural products and in making available to consumers a wonderful variety of products from all parts of the world, at all seasons of the year, and at remarkably low prices when the necessary services are taken into consideration. To-day, it is the railroad that carries the great bulk of our farm products, supplemented to only a slight extent by ocean and inland waterway transportation. Although the transportation sys-

tem of the United States has reached a very high state of efficiency, there are still many unsolved problems. The proper adjustment of freight rates between places and between commodities presents the same problems in connection with farm products as with others, and will not be discussed here. There are a few considerations connected with transportation, however, which are of special interest in the marketing of farm products and which will be treated briefly in this chapter.

Refrigerator Cars. — Although non-perishable foodstuffs have always been carried by the railroads, it was not until the refrigerator car was perfected that the carriage of perishables over long distances was made possible. We have become so accustomed to the use of goods brought from distant regions in refrigerator cars, that we do not realize how recently this traffic has developed nor what an important part the refrigerator car has played in making it possible. The first experiments in the use of ice during transit were made during the fifties;[1] the first successful shipment of dressed beef from Chicago to the East did not occur until 1869, but it was not until during the later seventies that Mr. Gustavus Swift began to develop this traffic on a large scale. Regular carriage of fruit and vegetables in refrigerator cars did not begin until during the eighties; some of the initial shipments from important sections were as follows: garden truck from Norfolk, Va., to

[1] For an account of the early history of special equipment cars and the part that they have played in the development of the country, see the author's Private Freight Cars and American Railways, Columbia University Studies in History, Economics, and Public Law, 1908, Chapters I and II.

New York City, 1885, and from North Carolina, 1887; first shipment of strawberries from California to New York, 1888; first carload of oranges from California to the East, 1888; first carload of oranges from Florida to New York, 1889. Shipments had been made in ventilator cars before these dates. The introduction of refrigerator cars was accomplished in the face of much skepticism and opposition, due to a common belief that fruit would decay rapidly after it had been on ice.

At first, the railroads refused to build refrigerator cars for the carriage of perishables; their reasons were (1) that it was too risky and questionable an undertaking and (2) that these expensive cars could be used only part of each year. It therefore devolved upon private companies to build the cars, and to rent them to the railroads, who pay the car companies a certain amount per mile (usually three fourths of a cent, loaded or empty) for the privilege of hauling them and of collecting the freight charge on goods carried. The packers are the largest owners of refrigerator cars, which they use principally in the carriage of dressed meats, but the Armour Car Lines also became the most important private company owning refrigerator cars for fruit and vegetables. In so far as a railroad company has lines in only one part of the country — and this was the rule in the early days — the fact that it could use refrigerator cars only part of each year was a real obstacle to railroad ownership. This is also true to a certain extent at present, but with the consolidation of railroad companies and the development of great systems covering large portions of the country and thereby reaching regions

with various climates, railroad ownership of refrigerator cars is becoming more common. Some of the railroads own refrigerator cars through their fast-freight lines which are of special importance in the carriage of poultry and dairy products from the Middle West to eastern markets.

The icing charges exacted by railroads and especially by private car companies have always been a source of dissatisfaction. Oftentimes a railroad would make an exclusive contract with a private car company, allowing only the cars of such company to carry commodities originating on its lines. The justification for such contracts is that the car company must be sure of sufficient business to provide adequate icing and re-icing facilities, and also that it may know beforehand in order to plan on having a sufficient number of cars ready to move the crops as they ripen. On the other hand, exclusive contracts gave these companies the power to exact unreasonable icing charges. Prior to 1906, the icing charge was not considered a part of the transportation rate, but in that year the Hepburn Act, amending the Interstate Commerce Law, made it so, and this placed it under the supervision of the Interstate Commerce Commission. Questions still arise, however, as to the reasonableness of icing charges. Railroads operating their own refrigerator cars have usually fixed transportation rates to include the cost of icing, but in 1915 when the trunk lines were permitted to increase their rates 5 per cent, they at the same time levied separate icing charges on certain commodities, which, together with the 5 per cent raise, resulted in substantial increases over the old rates.

Considerable extra expense is entailed by either railroad or private company in operating refrigerator cars. In the first place, the cars themselves are much more expensive than ordinary box cars; then there must be a system of icing stations, supplied with sufficient quantities of ice — often an expensive undertaking in warm climes; there must also be an efficient corps of inspectors, and also a special system of administrative and accounting machinery. Refrigerator cars have to be kept sweet and clean; the ice bunkers and drain pipes must be continually inspected. Agents located at certain points report to headquarters the time of arrival and condition of cars at such points. In the car accounting department of the Armour Car Lines, the movement of cars throughout the whole country is recorded, and the whereabouts of any single car can be ascertained at any time. The refrigerator car has been an important factor in the agricultural and economic development of the country. It has revolutionized the live-stock and dressed-beef industries; formerly, cattle were carried alive to eastern seaboard cities, but the hauling of dressed meats in refrigerator cars resulted in the decline of eastern cities as slaughtering centers and made possible the development of the great packing plants in Chicago, Kansas City, and other western cities. It also hastened the westward movement of the cattle-raising industry itself. As for the effect on fruit and vegetable growing, California could never have become of such importance in these respects were it not for refrigeration in transit; with the advent of this form of transportation the Michigan fruit belt,

which was previously dependent largely on Chicago and Milwaukee for its market, increased its output rapidly and got better prices for its fruit; the raising of lettuce, strawberries, etc., in Florida, watermelons and peaches in Georgia, peaches and tomatoes in Texas, etc., to supply northern markets, has likewise been made possible. And not only is the refrigerator car of importance as a protection against heat; it also offers protection against cold in winter.

Live-stock Cars. — Another form of special equipment furnished by the railroads is the live-stock car. The original stock cars had no provision for feeding and watering in transit; animals were unloaded at certain points for this purpose, but train delays, carelessness, and infrequency of feeding points on long hauls led to much needless suffering of animals and shrinkage. When improved "palace stock cars" were first devised, the railroads were slow to furnish this equipment, and private companies entered the field. Privately owned cars are unimportant, however, as compared with railroad-owned cars, and on the whole the service at present is satisfactory. The railroads which pass through the cattle-raising districts run special stock trains, at least once a week and sometimes oftener; they also provide cattle pens at local shipping points. Provision is made on cattle trains for owners or attendants of stock who wish to follow shipments to market to see that they are properly fed, watered, and sold.

Fast-freight Lines. — An important feature of the transportation of perishables is the fast-freight line. Fast-freight lines originally came into existence as pri-

vately owned companies, and their purpose was to furnish through cars which would pass from the lines of one railroad to another without the delay of transshipment at connecting points. This was in the day when railroad companies did not allow their cars to leave their own rails. Although the first through-routing companies were owned by outside companies, they were gradually taken over by the railroads themselves, so that to-day we have the Star Union Line, operated by the Pennsylvania, the M. D. T. (Merchants' Dispatch Transportation Company), operated by the New York Central, and a number of other lines operating over various railroads or combinations of connecting railroads. They still exist as specialists in handling through cars of perishables; they have their special agents going about among creameries, egg and poultry shippers, etc., to solicit shipments for eastern markets. There are certain consolidating points, along the Mississippi River, for example, where these companies hold their cars in readiness to concentrate into carloads the various consignments from the pick-up cars of local railroads, and to make up these cars into special trains of refrigerator cars, which pass to eastern markets at the greatest possible speed, and with careful supervision. The fast-freight lines are therefore special departments of the railroads which make a business of consolidating shipments from miscellaneous sources into solid train loads for through routing. The necessity and value of this service are apparent.

Difficulties in Handling Perishable Freight. — In spite of the efficiency of refrigerator cars, very perish-

able fruits and vegetables depreciate in value rapidly while in transit. It is said that a carload of strawberries loses in value from five to ten dollars an hour, according to the length of time it has been under way.[1] Special arrangements are made by the railroads to move this class of traffic on regular schedules and at the highest rates of speed. As explained in Chapter IV, diversion privileges are allowed at certain points, so that carloads after they have left the producing areas may be steered into the most favorable markets. Perishable products of any single section often mature during a very short period, necessitating the shipment of hundreds of carloads within a few weeks; railroads must anticipate such a movement and have a sufficient number of cars "parked" in the locality or at least readily accessible. The matter is complicated because of the shifting of producing centers as the season advances. Green vegetables begin to come north from Florida in January; a little later they come from Georgia and Alabama; then from the Carolinas and Virginia. It has been found that the boundary of the producing territory moves northward in the spring at an average rate of about fifteen miles a day. Far along into the summer perishable products move southward from Maine and Canada. All these considerations render necessary a careful study and planning ahead on the part of the railroads.

Need of Car-lot Shipments. — There are two reasons why perishables need to be shipped in car lots, — economy and dispatch. It is cheaper for railroads to

[1] Lee, The Interstate Railroad, *Annals*, November, 1913, p. 11.

haul solid carloads than small quantities, and hence C.L. (carload) rates are lower than L.C.L. (less than carload) rates. From the standpoint of the shipper it is of great importance that he ship enough at one time to get C.L. rates, and this is one of the main reasons why individual farmers cannot ship economically, and why there is a need of local buyers and coöperative shipping associations at country points. The railroads establish minimum quantities to which carload rates apply for different commodities, and just where these minima should be placed is one of the principal bones of contention between shippers and railroads. Carload shipments are also necessary in order to insure dispatch; less-than-carload shipments have to be transferred from one freight car to another at various transfer points, and although this service is done with great efficiency, it results in loss of time and deterioration when perishable goods are concerned.

Speed of Freight Trains. — The freight carried by the leading railroads is roughly divided into classes according to the attention that is given to speed in transit. In general, there are two principal classes, "slow" freight, and "preference" freight, although some of the railroads have three or even four classes of freight, receiving different kinds of service. Iron, coal, and similar commodities are moved by slow freight, the trains generally not running on fixed schedules, but only as occasion demands. Perishable fruits and vegetables are "preference" freight. As described by an official of the Pennsylvania Railroad,[1] "The equipment is

[1] Lee, *op. cit.*, p. 15.

carefully selected and preference trains have track rights not enjoyed by trains carrying coal, lumber, or stone. . . . The fast-freight trains running on schedule are restricted to thirty cars to a train. Each one of the cars bears a 'sticker' with the word 'preference' upon it. There is a rule that the 'stickers' must not be detached en route, but be filed with car way-bills. The purpose of the 'stickers' is to make doubly sure that the cars are dispatched from their starting points in the proper trains, and reach their destination promptly."

The regular schedules for trains carrying perishables have to be governed largely with reference to time of arrival at destination. Wholesale markets in the large cities open early in the morning and the day's trading is practically finished within three or four hours, so unless goods reach the city in time for market, they have to wait over until the next day. The rate of speed attained by freight trains depends largely on the character of the roadbed and the number of transfers from one railroad to another. In 1911 the rate of speed from Los Angeles to Chicago and from Jacksonville to Chicago averaged about thirteen miles an hour, including all stops.[1] Over some long hauls the average rate is frequently about sixteen miles an hour, and in trunk line territory the special refrigerator trains attain averages of eighteen or twenty miles an hour, including stops. Passenger trains over good roads frequently average only thirty miles an hour over long distances, and in many parts of the West and South, they average much less

[1] Andrews, The Reduction of Waste in Marketing, Yearbook of the U. S. Department of Agriculture, 1911, pp. 168 and 169.

than this. Train loads of peaches move from Fort Valley, Ga., to New York City in two days; a train of berries leaving Richmond, Va., at 2.30 A.M. reaches New York the same evening; cattle are carried through from Pittsburgh to the docks in Philadelphia in less than twenty-four hours.[1]

In spite of the care given by the railroads to this class of traffic, delays still occur, due to storms, freight blockades, etc., often resulting in heavy losses to shippers. Delay is often caused by congestion of freight terminals, which are generally poorly equipped to handle or store perishable goods until they can be hauled away. The provision of adequate terminal facilities is one of the great problems of the day. Conditions in these various respects have improved appreciably during the past few years, however, and the present tendency is to still further improve the methods of handling perishables.

The Freight Charge as an Element of Marketing Cost. — The importance of the freight rate as a factor in the total spread between farmer and consumer depends on four things: distance over which goods are shipped; relation between bulk of a commodity and its intrinsic value; the weight of packages in which goods are carried; and the amount of special care and attention required during transit. The distance from market is not so important as is commonly thought, except for those commodities which are raised only in regions very remote from the principal consuming centers. The freight rates to eastern markets on California cantaloupes, oranges, and peaches and on northwestern boxed

[1] Lee, *op. cit.*, p. 12.

apples are of decided importance, both because of the great distance and the care and icing required in transit. To make it possible to market such commodities at all over great distances, it is necessary to make long-distance rates very low as compared with the rates on similar commodities over short distances. The Michigan apple grower therefore does not have as much advantage over the Yakima Valley grower in the New York market as one might think. The extent to which rates should be graduated according to distance is still one of the great transportation problems. Some believe in "postage-stamp" rates, whereas others believe in a rigid adherence to the distance principle. It is believed by most students of the problem, however, that the compromise system gradually developed by the railroads — in spite of many inconsistencies and discriminatory practices — has worked out to the greatest advantage of every one concerned and has been a great factor in the orderly development of the country.

For goods shipped over the same distance the relation between bulk and intrinsic value of the commodities is the principal factor which determines the importance of the freight rate as an element of marketing cost. A freight rate of ten cents per 100 pounds on wheat from Minnesota to Minneapolis would amount to 6 per cent of its wholesale value when wheat is selling at one dollar a bushel. A rate of forty cents per 100 pounds on thirty-cent butter would amount to only $1\frac{1}{3}$ per cent of the value. The freight rate has so little effect on the retail price of butter that Minnesota creamery butter sells at practically the same price in Minneapolis as in

New York. Potatoes, cabbages, and hay are examples of commodities that are very bulky as compared with their value, and the freight rate forms a larger proportion of marketing costs. Packages such as butter tubs, egg cases, chicken coops, apple boxes and barrels, and berry crates have to be taken into consideration in computing freight rates on the commodities themselves, whereas in the case of articles like grain, which are commonly shipped in bulk, there is no package which adds to the weight. As mentioned in Chapter VII,[1] it has been estimated that on the average, transportation charges constitute only about 7 per cent of final retail prices of farm products.

Car Supply and Demurrage. — One of the constantly recurring problems in connection with the marketing of farm products is that of procuring an adequate supply of cars to move commodities without delay from producing sections. For some commodities, like butter and live stock which move with relative uniformity throughout the year, this problem is not so acute, but in the case of grain, which is marketed in huge quantities during the summer and fall, and in the case of perishables, which must be moved without delay during their short ripening season, it is often difficult for railroads to furnish enough cars. In years gone by, when railroads were first being built, serious losses often occurred because of lack of equipment, and much dissatisfaction resulted from the discriminatory practices of railroads in favoring certain shippers. Conditions have been vastly improved in these respects. The interchange of freight

[1] P. 188.

cars among the various railways is a great benefit; the studying of crop conditions and planning ahead so as to have sufficient cars on hand have also relieved the situation; the private-car lines, by shifting their cars from one part of the country to another as crops ripen in the various producing sections, have performed an important service in the movement of perishables. The whole problem is rendered complex, first by the fact that the number of available cars varies greatly with general industrial conditions of the country, and second by the fact that the quantity of products raised varies greatly from year to year.

To facilitate the movement of cars, the railroads collect demurrage charges. The collection of demurrage was first inaugurated in the United States about 1887 by a few roads at badly congested terminals, but has now come to be applied on all roads and at all stations.[1] Shippers or receivers are allowed "free time" of usually forty-eight hours to load or unload, but after the expiration of this period such shippers or receivers must pay demurrage (usually one dollar) for each twenty-four hours or fraction thereof that a car is detained. Most of the states regulate demurrage on intrastate traffic either by statute or through their railroad commissions, and demurrage on interstate traffic is regulated by the "National Car Demurrage Rules" or the "Uniform Code," as it is called, under the supervision of the Interstate Commerce Commission. Shippers have retaliated by having "reciprocal demurrage" adopted in

[1] See White, Demurrage Information for Farmers, Bulletin No. 191, U. S. Department of Agriculture.

several states, whereby the railroads themselves are penalized for failure to furnish cars within certain periods after they are ordered. Such rules have forced the railroads to provide larger numbers of cars, and have also prevented them from favoring certain heavy shippers at the expense of others.

Trolley Freight. — An important development of recent years is the growth of interurban electric lines which are giving more and more attention to the carriage of freight. This form of transportation has great possibilities in extending the truck-garden area to distances of from twenty-five miles to fifty miles from our large cities, thus enabling farmers to undertake more diversified and more profitable farming, and enabling city consumers to draw a greater supply of fresh vegetables at some reduction in cost. Already such cities as Indianapolis, Cleveland, and Philadelphia have numerous interurban lines that bring farm produce from rich agricultural regions that were formerly served with inadequate transportation facilities. An investigation made in Philadelphia, however, indicates that less attention has been given to the development of freight service on these lines than might be expected.[1] The reasons for the inadequacy of this service are as follows: (*a*) there are differences in gauge and wheel specifications, so that through-freight cars cannot be run into the city; (*b*) connecting lines fail to enter into traffic agreements which would obviate unnecessary transfers from one car to another; (*c*) there has been a

[1] See King, "A Study of Trolley Freight Service and Philadelphia Markets," pp. 15–23.

lack of interest in the development of freight service on the part of some of the trolley lines. It appears that conditions among the interurban lines around Philadelphia are similar to those that existed among steam railroads years ago when differences in gauge and desires of railroads to keep their cars on their own tracks prevented through shipments over connecting roads.

The possibilities of trolley freight service vary in different cities. When it is difficult and expensive to reach the heart of a great city, and where transportation facilities are already congested, as in New York, there are certain limitations to the development of trolley freight service which do not appear in a city like Indianapolis, which is easy of access from every direction, and where large interurban cars can operate to the center of the city. It must also be remembered that interurban lines must depend mainly on passenger traffic, and that they are developing about as rapidly — in many cases more rapidly — than local conditions justify. The future will probably see a great development of this kind of transportation, and adequate attention should be given to the carriage of freight — especially farm produce, including milk — in the course of this development.

Ocean Freight. — Facilities for ocean transportation and its cost are of importance to those who export farm products in large quantities. Ocean transportation differs from railroad transportation in the following particulars: a large part of the traffic has to be carried by steamers that do not run on regular schedules; ocean freight rates vary frequently; and in the main, ocean

freight rates are much lower than railroad rates for the same distance. The facts that ocean freighters do not run on regular schedules and that the rates constantly fluctuate present difficult problems to the exporter; he must engage space ahead in order to get transportation for his products, and he must have enough products to use the space engaged, or else stand a loss unless he can dispose of his space to some one else. Ship brokers act as middlemen in bringing vessel owners and exporters together.

That ocean rates are lower than rail rates is illustrated by the fact that while it costs from fifteen to eighteen cents per bushel to haul wheat from Kansas points to Galveston by rail, it costs only about six cents to carry it from Galveston to Liverpool by steamer. Wheat is taken from Portland, Oregon, to Liverpool by steamer at as low a rate as from Portland to Chicago by rail. A few years ago when the average rate on cotton to Savannah from points in Georgia, South Carolina, Florida, and eastern Alabama was forty-one cents per 100 pounds, the rate from Savannah to Liverpool was only thirty-three cents. The destinations of ocean freighters are often changed en route, just as carloads of perishable freight are diverted to the most promising markets. A vessel will start under load for some convenient port, there to receive or await orders; the owners of the cargo in the meantime find a sale and cable orders to the vessel to proceed accordingly.

Transportation on Inland Waterways.[1] — Formerly

[1] The discussion of this subject is based on Andrews, Inland Boat Service: Freight Rates on Farm Products and Time of Transit on In-

large cities received the bulk of their farm products by boat over river, canal, or inland bay; as already stated this method of carriage has given way very largely to rail transportation. And yet in certain sections of the country water transportation is still of importance. Hudson River steamers carry farm produce from Albany and intermediate points to New York City; grain is still carried in large quantities from Buffalo to New York City via the Erie Canal and the Hudson River, and the completion of the New York Barge Canal will probably result in a great increase in this traffic. Baltimore, Washington, and Norfolk are served by numerous boat lines that ply the waters of Chesapeake Bay, the Potomac, Rappahannock, Patuxent, and other rivers; there is a considerable movement on the Ohio and Mississippi rivers, especially to such points as Cincinnati, St. Louis, Memphis, Vicksburg, and New Orleans; on the Pacific coast, steamer lines are found on the Sacramento and San Joaquin rivers emptying into San Francisco Bay, and on the Columbia River and its tributaries.

Water transportation has certain advantages over rail transportation for such limited parts of the country as it can be used. There is chance for greater competition between carriers, since the right of way cannot belong to a single company; opportunity is afforded for people of small capital to engage in waterway transportation, as evidenced by the frequent carriage of garden truck in gasoline launches and sail boats in

land Waterways in the United States, Bulletin No. 74, U. S. Department of Agriculture, 1914.

Chesapeake Bay and in and about New Orleans; transportation by water is generally cheaper than by rail; frequently river transportation is quicker than rail transportation because there are no such delays as those at connecting railroad points; on certain rivers boats can stop anywhere along the banks and do not require expensive wharves and terminals. On the other hand, river steamers do not offer such good facilities for preserving perishables as do the railroads, and they are limited to the carriage of these products over short distances. Furthermore, steamers can reach only certain points in large cities, whereas railroad cars can be switched to elevators, warehouses, etc.

The importance of water transportation as compared with rail transportation in the carriage of farm products is illustrated by the following figures: During the five years 1908–12 the proportion of total receipts of barrel apples reaching Cincinnati by boat varied from less than 1 to over 12 per cent in different years; between 1 and 2 per cent of the total receipts of cattle came in this way; the proportion of eggs from 4 to 6 per cent; the proportion of hay from 1 to 2 per cent. Memphis received proportions of from 10 to 13 per cent of her total cotton receipts, and New Orleans from 3 to 7 per cent by boat. St. Louis received as high as 54 per cent of her barreled apples in 1911; cotton receipts by boat constituted from 4 to 6½ per cent; eggs from 2 to 5.4 per cent; and wheat from less than 1 to over 2 per cent. Although these proportions of total receipts seem very small, they amount in the aggregate to considerable quantities. If figures were available for garden truck,

they would probably show a greater relative importance of river transportation than for the staple commodities enumerated above.

Although inland water way rates are usually lower than rail rates, there are a few exceptions to this rule. Between Hartford, Conn., and New York City the rates on apples, eggs, hay, and potatoes are the same by rail as by water, although the water route is 52 miles longer than the rail route; the rates per hundred pounds on apples and eggs are higher between Charleston, W. Va., and Cincinnati by boat than by rail.

It has been found that the freight rates by boat constitute only from less than 1 per cent to about 3 per cent of the farm value of cotton; the water rates on eggs vary from less than 1 to as high as 10 per cent of farm values; on hay, from 10 to 40 per cent; on apples and potatoes, about 10 per cent; on wheat, from 3 to 15 per cent. If figured on retail prices, these proportions would of course be much smaller.

Transportation by the Great Lakes. — Although steamers on the Great Lakes carry considerable quantities of fruits and vegetables from Michigan and Wisconsin points to Chicago, and to a slight extent from various points to cities such as Cleveland and Buffalo, the most important farm product carried is grain — especially from Duluth and Chicago to Buffalo for transshipment to eastern markets or to foreign countries. The lake lines have never offered adequate facilities for the carriage of perishable freight, although the shippers of butter and eggs from northern Minnesota have clamored for such service. One reason why the

steamer lines have not been interested in developing this business is that they are owned by the railroads which also operate the fast-freight lines that carry this remunerative class of traffic. By order of the Interstate Commerce Commission three boats were fitted with refrigeration facilities, and during the navigation season of 1914 carried considerable quantities of butter and eggs from Duluth at substantial savings to shippers in the northern half of Minnesota and North Dakota. The order of the Interstate Commerce Commission in 1915 to the railroads to divorce their steamship lines operated on the Great Lakes may result in an extension of this service in the future. The ownership of these lines by railroads has certainly been a disadvantage to shippers with respect to the shipment of perishable commodities in the past.

CHAPTER XII

THE PRICES OF FARM PRODUCTS

The ordinary presentation of the subject of market prices in standard works on economics is too involved, and contains too many excursions into realms of abstract thought, to be satisfying to the reader who is not trained in economic theory — and, it might be added, to some professional economists themselves. The term "price" means value expressed in terms of money. To thoroughly understand prices, it is therefore necessary to begin with the concept of value, and to study value under various conditions of demand and supply. It is not proposed in this place, however, to enter into any such theoretical discussion, but rather to present some of the practical aspects of price determination as they appear in commercial life.

Most people realize in a general way that prices depend on demand and supply, but the impossibility of measuring either demand or supply accurately, or of applying any definite formula so as to determine what the price ought to be under certain conditions, has led some people to even question whether demand and supply really have much of anything to do with prices. This feeling has of course been accentuated by positive instances of monopolistic control, under which the

great forces of demand and supply are not allowed to work themselves out naturally. The belief that prices are "manipulated" has led to some extreme views, and there are many people who sincerely believe that the prices of practically all farm products are fixed by certain middlemen or produce exchanges for their own benefit. The mere organization of a trade into an exchange or association is apt to be looked on with suspicion; the issuance of price quotations is another factor which causes misgivings; and the constant and continuous fluctuations of prices of certain commodities (notably wheat) even during a single day are accepted by some as *prima facie* evidence that prices are being manipulated without any reference to demand and supply.

These misgivings have led to recommendations that prices be controlled by the government, and that the cost of production be used as the basis of such determination for farm products. The Minnesota Union of the American Society of Equity at its annual convention in December, 1913, passed a resolution declaring that "the doctrine of supply and demand is false" and that prices are made "artificially by the modern business combinations," and that "hence the only true basis upon which food products may be priced is on their cost at their source on the farm." This interesting resolution went on to say, "And we respectfully ask our professors at the College of Agriculture to modify their views on this economic question, and give us a new economy based on modern conditions as far as food products are concerned." It is not proposed to explain in this place the impracticability of basing prices arbi-

trarily on cost of production, but the instance referred to above is definite evidence of the feelings that exist. Even if such extreme views are held by a comparatively small portion of the rural population, it is true that there are many others who have the same feelings to at least a moderate degree, and to whom the words supply and demand have little meaning.

Different Prices of the Same Article. — In the first place, there are different prices for the same article at the same time. There is the price that the farmer receives, the price that the wholesaler pays the country shipper, the price that the jobber pays to the wholesaler, and the price that the retailer charges to the consumer. In fact, there is a different price (ordinarily) every time that the commodity changes hands, the price rising at each successive turn-over of the commodity. In a general way, prices in the long run tend to conform to cost of production. But different producers have different production costs. There are always some producers whose costs are so high that they just barely get a return sufficient to cover the outlay, without making any profit. If the price goes down, those who are just on the margin stop producing, and the supply is curtailed. Thus it is seen that the supply depends largely on cost of production. The price must be high enough to induce enough people to produce. On the other hand, if it goes too high, people will stop consuming; in other words the demand will fall off. People will stand a greater increase of price for some commodities (the necessities of life) than for others (comforts and conveniences).

But in this brief explanation, what do we mean by "cost of production," and what prices are we talking about? The farmer is concerned with the price he gets, and compares that with his own cost of production. The consumer demand depends on retail prices, which are a great deal higher than farm prices, — in some cases more than twice as high. It will be remembered that marketing is a part of production; hence the cost of marketing is a part of the total cost of production. In other words, the total cost is made up of two parts, — the farm cost and the marketing cost, the latter including transportation cost. In considering the relation between *retail prices* and cost of production, we have to consider the total cost. In other words, retail prices must be *high enough* to remunerate both the marketing agents and the farmers. If these two elements of cost, added together, result in a retail price so high that consumers refuse to buy, the price will fall below the total cost of production, and both middlemen and farmers who are least efficient or who are working under disadvantages will cease to produce, and the supply will be curtailed. In discussing the relation between prices and costs of production, economists have too generally considered only the factory or farm costs; they have not given sufficient attention to the fact that marketing costs must also be included in determining the relation between supply and demand, because demand, in the final analysis, depends on the height of the retail price.

Relation between Retail, Wholesale, and Farm Prices. — If the production of all commodities were

evenly distributed over the earth's surface, the price of each commodity would be approximately the same in different places. But certain sections of a country specialize on different commodities, so that these sections have a surplus for shipment, while the other sections require this surplus for consumption. In the marketing of butter in the United States, for example, the regions of surplus production are in the Middle West, and the greatest centers of consumption are on the Atlantic seaboard, from Baltimore to Boston. The retail price of any given quality of butter in New York, the most important consumptive center, depends on the willingness of people to pay (or demand) on the one hand, and the total cost of production on the other hand. The final retail price once determined by the interplay of demand and supply, other prices in the United States bear a fairly definite relation to it. The wholesale price in New York is less than the retail price by the cost of handling through jobbers and retailers. The wholesale price in Chicago is approximately the New York wholesale price minus the cost of hauling the butter from Chicago to New York. The price received by the Minnesota creamery is the wholesale price in Chicago minus the cost of getting it from the Minnesota point to Chicago, — or in other words, the price received by the Minnesota creamery is the New York retail price, minus cost of handling in New York, minus cost of handling and transportation from Minnesota point to New York.

The prices of most farm products are found to be built up (or down) this same way, depending first on

the adjustment of supply and demand in centers of consumption, and varying in the producing sections according to the cost of marketing (which, in turn, depends partly on distance from market). It must not be inferred from this, however, that prices depend entirely on the willingness of consumers to consume; they depend equally on the willingness of farmers to produce. In other words, the increment of final price received by the farmer has got to be high enough to induce him to produce; otherwise he will quit farming, or he will raise some other commodity. It is this interplay of two immeasurable and complex forces working in opposite directions which makes the whole problem of market prices so perplexing and confusing. And yet from a practical standpoint, there is the relation pointed out above between farm prices and city retail prices, the differentials between the various prices being measured roughly by costs of marketing. This relation will be brought out more clearly in subsequent paragraphs where the price of wheat is more carefully analyzed.

Wholesale Prices. — The wholesale price of a commodity in any city means the price that wholesale receivers of the commodity charge for large lots "on the street" and not delivered. In other words, it is the price that any one must pay, be he jobber or large retailer, provided he takes the product in wholesale quantity at the place of business of the wholesaler. The price that the jobber charges the retailer for small lots delivered at the retail store is thus higher than what is ordinarily understood as the wholesale price. It is

in the wholesale trade where business is most highly organized, and where expert dealers most freely interchange their opinions with regard to the forces affecting demand and supply. As a consequence of this condition, wholesale prices are more susceptible to, and they more accurately conform to, the various elements affecting demand and supply than do either retail or farm prices. Wholesale prices therefore fluctuate more often than do either of the other two prices. Retail prices remain fairly constant because of the bother to the retailer of continually altering prices, because of the willingness of consumers to continue to pay the same price day after day in spite of minor fluctuations in wholesale prices, because the retailer buys enough of some goods at a time to last several days and hence has to be governed by his cost price in spite of subsequent wholesale fluctuations, and finally because the margins taken out by retailers have to be so large to cover high merchandising costs that fluctuations in wholesale prices are often so insignificant that it is not worth while to change retail prices accordingly. In the case of commodities like sugar, flour, butter, and eggs, where the retail margins are relatively small, retail and wholesale prices bear a more direct relation to each other.

Farm prices and wholesale prices follow each other more closely, but the former are not determined so accurately or carefully as the latter. This is shown in the case of prices paid for cotton at shipping points in Oklahoma (cited in Chapter II) where the prices paid for different bales of the same grade and on the same day differ widely. The same is largely true in the

case of grains. The primary market prices vary during a single day, and the variations are in eighths of a cent at a time. Under the system in vogue in the Northwest each country elevator has a fixed price for each whole day, and this price is expressed in an even number of cents with fractions disregarded. In such highly organized trades as the grain and cotton businesses, it would seem that country prices should be made to conform more accurately to primary market prices, although it would be useless as well as expensive to have them follow the hourly fluctuations.

Price Fluctuations for Different Commodities. — It has already been pointed out that the phenomenon of frequent price fluctuations is considered by many as an indication of manipulation. This feeling is particularly evident in connection with wheat prices in the Northwest. The newspapers publish diagrams drawn on a large scale showing the course of wheat prices during the day, and there are those who argue that it is absurd to say that such fluctuations during a single day are caused by changes in demand and supply. The fact that such prices result from transactions on the floors of grain exchanges, — organizations that exercise a strict supervision over the admission of members, — increases the feeling that monopoly power is exercised in fixing prices.

This attitude toward price fluctuations is based on a misconception of the price-making machinery and of the manner in which the factors affecting demand and supply are registered in the market place. As a matter of fact, frequent fluctuation in price is an indication of a high degree of competition, rather than of a lack of

competition. Furthermore, a study of market prices reveals the fact that in cases where prices fluctuate most frequently, the fluctuations themselves are the least severe. It will also be observed that commodities whose prices fluctuate most frequently are those whose marketing machinery is most highly developed or organized, because it is under such conditions that expert traders most frequently exchange their opinions in the form of bids and offers, and that there is the best system of collecting and disseminating market information.

These fundamental principles are admirably illustrated by comparing price fluctuations of wheat with those of such commodities as butter and potatoes. In the case of wheat, there is an organized and continuous market place; information about prices, crop conditions, and factors affecting demand are received continuously from all parts of the world; every single factor affecting either demand or supply is instantly recorded in the bids and offers of the expert traders on the trading floor. The price varies from hour to hour, but by eighths of a cent at a time, and may, and often does, continue for days at a time within a range of one cent or less. The constant registering of opinions results in such a heavy pressure from both above and below, that the price itself quivers along, delicately subject to every relaxing or strengthening of the pressure from either side. The price is as perfectly adjusted by the interplay of supply and demand forces as is possible.[1]

[1] It is not to be inferred from this explanation that wheat prices are never manipulated. There is no doubt but that "corners" and minor

In the case of butter, the market is also well organized, but not to the extent that the wheat market is; although some butter is sold on organized exchanges, where traders come together for a short time each day and register their opinions through bids and offers, the great majority of the transactions are the results of private and individual bargainings. Fluctuations in demand and supply are not registered so continuously and openly, and hence the price of butter is not so sensitive and does not respond so quickly, and the price often remains without change for several days at a time. Although the unit of trading in butter (the pound) is smaller in value than the wheat unit (the bushel) the fluctuations when they do occur are apt to be in half-cents or even in whole cents, rather than in eighths of a cent as in the case of wheat. The same phenomenon with regard to butter is evident in comparing the price quotations in different markets, according to the degree of organization of the trade in the respective markets. In New York City, for example, the butter trade is well organized, and the price fluctuates more frequently than at Elgin, for example, where the butter trade meets but once a week, and where the quotation remains the same throughout the week without change. Although some traders object to the inconvenience caused by an "erratic" market, as some style the New York butter market, yet the more frequent fluctuations represent a more perfect and more scientific adjustment of price to actual conditions of supply and demand.

manipulations have occurred and do occur, but such instances are infrequent, and in no way invalidate the general proposition as set forth in the text.

In the case of potatoes, on the other hand, the market is still less highly organized; there are no exchanges where traders come together; exact market information is more difficult to obtain; all transactions are the results of individual bargainings; the price often remains constant for days at a time; and fluctuations of five cents a bushel at a time are not altogether infrequent.[1]

The Price of Wheat. — The price of wheat is always of universal interest, and the year 1914–15 (when this book was written) will go down as one of the most remarkable wheat years in our agricultural and commercial history. In that year, the United States had the largest crop in its history, and yet the prices were the highest that they had been for years. The prices of flour and bread rose until the whole nation became alarmed, and demands arose from some quarters that the exportation of wheat be prohibited. The Federal Government was led to make an exhaustive inquiry to ascertain whether the price was raised artificially by speculators, or whether it was forced up by purely natural conditions.

The international interrelations that determine the price of wheat are difficult for the layman to understand. The statements that wheat has a world market, that the price is fixed by world demand and supply, and that the price in the United States depends on the price in

[1] In addition to short-time price fluctuations which the writer has had primarily in mind in the foregoing discussion, there is the question of seasonal price fluctuations caused by variations in quantity produced at different seasons and by various other factors. See Taylor, The Prices of Farm Products, Wisconsin Agricultural Experiment Station Bulletin No. 209. For the effect of cold storage on prices see Chapter VIII, above.

Liverpool, are only vaguely comprehended by those who have not given the subject serious thought. Inasmuch as the wheat situation admirably illustrates the relation between prices in consuming centers and those in the producing sections, already referred to, a more elaborate explanation of the factors governing the price of this commodity may not be out of place.

Principal Importing and Exporting Countries. — In the first place, it must be borne in mind that certain countries of the world produce much more wheat than they consume, and therefore have surpluses to export; other countries produce only a part of what they need, and consequently import wheat from the countries of surplus production. The six principal wheat-exporting countries, with the average annual exports for a five-year period, appear in the following statement:

Average Annual Exports (1909–13) of Raw Wheat of Six Principal Exporting Countries[1]

	Bushels
Russia	148,262,700
Argentina	96,858,600
Canada	65,064,500
United States	53,024,700
India	40,711,100
Australia	36,670,700

[1] The statistics used throughout are taken from the Bulletin of Agricultural and Commercial Statistics, International Institute of Agriculture, Rome, Italy, February, 1915. Inclusion of figures for exports and imports of flour would change the relative importance of the countries listed, and would give a more accurate picture of international relations, but the raw wheat figures answer the purpose intended in this discussion.

The six principal importing countries, with average annual imports for a five-year period, are as follows:

AVERAGE ANNUAL IMPORTS (1909–13) OF WHEAT OF SIX PRINCIPAL IMPORTING COUNTRIES

	BUSHELS
Great Britain and Ireland	191,693,300
Germany	87,357,000
Belgium	73,422,800
Netherlands	63,355,100
Italy	56,302,900
France	34,169,500

A study of these figures reveals the fact that the principal importing countries are all in western Europe, and that they are crowded together on one very small portion of the earth's surface. Great Britain is the heaviest importer, and Liverpool is the principal wheat market in that country. The small section of the earth's surface represented by these countries is the great wheat-consuming area of the world, and Liverpool, as the most important single market, may be considered the center of this consumption area. It is apparent that wheat sent from the countries of surplus production must naturally converge on this center.

On the other hand, the principal exporting countries are scattered over the earth's surface, and most of them are at a great distance from the center of consumption. These countries also have very different climates, and some are located in the northern hemisphere and some in the southern. As a consequence, the harvests come

at different times of year, resulting in a much more uniform flow toward Liverpool throughout the year than otherwise would be the case. This is made clearer by the following statement, which shows the three principal months of export for the six principal exporting countries:

Country	Three Principal Months of Export
Russia	September, October, November
Argentina	February, March, April
Canada	October, November, December
United States	August, September, October
India	June, July, August
Australia	January, February, March

Liverpool Price the Basis. — Since the wheat surpluses flow toward Liverpool, the Liverpool price is the price that is finally paid for all wheat converging there, and hence the price of wheat in any exporting country will be approximately the Liverpool price minus the cost of freight, handling, interest, and insurance involved in carrying it to that point. Under normal conditions, the price of wheat at Chicago is approximately the Liverpool price minus the cost of transportation and handling. Likewise the Minneapolis price. The price at a point a hundred miles west of Minneapolis would in turn be the Minneapolis price minus freight to Minneapolis, minus incidental expenses of handling, etc.

The situation may be made clearer by imagining that the whole wheat world is shaped like a large shallow bowl. In the center and at the bottom is Liverpool. We can then imagine streams of wheat flowing from the great countries of surplus production toward the bottom

of this bowl. But each stream has certain obstacles or dams over which the wheat must flow in order to reach the bottom. For instance, the wheat flowing from North Dakota encounters a dam at Duluth, in the shape of flour mills, which take a certain amount of the wheat. There are also great reservoirs, in the form of terminal elevators, which hold the wheat temporarily, and regulate the flow. The dam at Duluth is easily overcome by the great bulk of wheat arriving at that point, and flows on to Buffalo, where other flour mills partially stop the flow. It will be noticed that these streams from the producing areas to the consumption center grow smaller as they progress, rather than larger. The wheat after leaving Buffalo also encounters some resistence at New York City or at Boston, but still there is a surplus that overflows, and that goes on to Liverpool.

Now, whether the drawing power at Liverpool is great enough to keep wheat flowing past these obstacles depends on the price that Liverpool is willing to pay. When American wheat continues to flow over the various dams, it is said to be on an "export basis," and in such a case prices in the United States are based directly on Liverpool prices, as explained above. Normally, American wheat is on an export basis, because we produce more than we consume, but our exportable surplus has been growing smaller of recent years (except in 1912, 1913, 1914). In other words the dams on the various streams leading from western United States have sometimes been strong enough to practically arrest the flow of wheat toward Liverpool. In 1910, for example, the very strong dam at Minneapolis, where the greatest

flour mills of the world are located, proved ample to catch and hold all the wheat that could be brought there. In fact, Minneapolis became the center of a temporary depression which diverted the flow of other streams from their natural courses toward Minneapolis. This was done by the demand of the Minneapolis millers which raised the price to such an extent that it was much higher than the Liverpool price minus the cost of transportation to that point. Minneapolis was "out of line" with the other markets.

What Determines the Liverpool Price? — Continuing the metaphor further, let us return to Liverpool, and consider the factors that determine the price that European millers are willing to pay to keep the streams flowing toward Liverpool. In the first place, it depends largely upon the intensity of the demand of people in that section of the world for wheat and its derivative products. This demand is a fairly constant quantity, although the possibility of curtailing the consumption of wheat bread and substituting rye, barley, or other products serves as a partial check on the price that people are willing to pay. The size of the wheat crop in the importing nations of course affects the intensity of the desire for wheat from other countries. Given a fairly constant desire for wheat, Liverpool will naturally pay only enough to induce the continuous flow from the wheat-exporting countries. If all these countries have large surpluses, it takes but little inducement to bring large amounts to that point. If there is a drought or other calamity in Russia which destroys a large part of the crop in that country, Liverpool will have to pay a

little higher price so as to induce a sufficient flow from the other countries. If there are bad crops all over the world, Liverpool frantically raises the price to induce shipments, but the dams in all the wheat-raising countries are immediately strengthened to stop the flow, and we have high prices everywhere. If crops are bad in all but one or two countries, Liverpool will still have to pay high prices to induce sufficient shipments from these one or two countries. In such a case, the farmers in these one or two countries are in a particularly fortunate situation, because they get high prices for large crops.

This last supposition pictures the actual state of affairs that occurred in 1914–15 and the United States happened to be one of two countries with large exportable surpluses. In 1914 the world wheat crop was abnormally short. Russia's crop was not only far below normal, but the exportable surplus was shut off at the Dardanelles by the European war. Both Canada and India had short crops, and in Australia the crop failure was so severe that she had no exportable surplus at all. It was left for the United States and Argentina, the only two countries with unusually large crops, to make up for the shortages of other countries, and the situation was made more critical by the extra demand for wheat in England and France, on account of the war. It is not surprising that the price of wheat was high in the United States in spite of her large crop, and the situation at that time illustrates admirably the workings of the laws of demand and supply, and the international interrelations that play such an important part in determining the price of wheat.

CHAPTER XIII

PRODUCE EXCHANGES

Trade Organizations. — There are discernible two general types of organizations among wholesale dealers of agricultural products: first, the so-called produce exchanges, which are voluntary associations of dealers in a single market that usually handle one commodity or a narrow range of commodities; and second, what may be termed for convenience, trade associations, which consist of dealers also in a single trade or closely allied trades, but in several localities. Some of these latter include traders only within a single state; some of them are of national scope. They include such organizations as the National Poultry, Butter, and Egg Association, the National Grain Dealers' Association, and the National League of Commission Merchants. *The activities of such organizations have to do with* questions of general interest to the trades as a whole, such as freight rates, railroad practices concerning refrigeration facilities and the settlement of claims, state and federal legislation, etc. It will be noted that this classification does not include promotive and civic organizations of merchants from various trades in a single city commonly called chambers of commerce, because ordinarily such organizations deal only incidentally with the marketing of farm products.

General Character of Produce Exchanges. — The term "produce exchange" is used herein with a rather broad and comprehensive meaning. It includes grain exchanges, cotton exchanges, coffee exchanges, butter and egg exchanges, live-stock exchanges, hay exchanges, cheese or dairy boards, and even the smaller local organizations of fruit and produce men. As will be pointed out below, however, the last-named perform so few of the functions of the more important exchanges that they hardly deserve to be classed with them. The general object of a produce exchange is to facilitate the marketing of the commodity or commodities handled by the members. In no case does the exchange itself buy and sell the commodities handled by its members; it is merely an association of merchants.

As may be inferred from their names, produce exchanges are commonly concerned with the marketing of specific commodities, but there are some exceptions to this principle. The New York Produce Exchange, for instance, is composed of merchants who handle a rather wide range of products, including grains, flour, provisions (principally pork and lard), and cotton-seed products. The Chicago Board of Trade, although primarily a grain market, also includes dealers in provisions. The other grain exchanges, such as the Minneapolis Chamber of Commerce, the Duluth Board of Trade, and the Kansas City Board of Trade, handle practically nothing but grains. The two most important cotton exchanges are those of New York and New Orleans; in the coffee trade, there is the New York Coffee Exchange; and in the butter and egg trade there are the New York Mer-

cantile Exchange, the Chicago Butter and Egg Board, the Elgin Butter Board, as well as organizations in other large cities composed principally of butter and egg (and sometimes poultry) dealers, as well as dealers in other kinds of produce. The Boston Fruit and Produce Exchange, which is rather unique among produce exchanges, includes among its 800 members, 253 dealers in fruit and vegetables, 177 in butter, cheese, and eggs, 140 in provisions, 28 in poultry and game, 36 in groceries, 11 in fish, and 161 in miscellaneous trades.

Legal Basis of Produce Exchanges. — Produce exchanges are usually incorporated associations. Some derived their charters as the result of special legislative acts; others are incorporated under general laws. The New York Produce Exchange was first organized as a voluntary association in 1850; it was incorporated under a special charter granted by New York state in 1862 under the name of "New York Commercial Association." The act of incorporation was amended in 1868 to allow the organization to change its name to "New York Produce Exchange." The Chicago Board of Trade, organized originally in 1848, was incorporated under a special charter granted in 1859. The Milwaukee Chamber of Commerce was granted a charter by the state of Wisconsin in 1868. The Minneapolis Chamber of Commerce, on the other hand, was incorporated under a general statute of the state of Minnesota, which provides that any number of persons, not less than three, may associate themselves and become incorporated as a chamber of commerce or board of trade, for the purpose of advancing the commercial interests of the community,

acquiring and disseminating useful business information, and adjusting trade disputes.

Through these general or special laws, produce exchanges are granted powers not possessed by ordinary corporations. This is especially true with regard to the right to settle disputes through arbitration boards, which will be described below. The Minnesota statute also specifically authorizes corporations organized under it to inflict fines on its members, and to prescribe the terms and conditions of membership. The charter of the New York Mercantile Exchange cites as the object of the association "to provide and regulate a suitable room or rooms for an exchange in the city of New York; to foster trade; to protect it against unjust or unlawful exactions; to reform abuses; to diffuse accurate and reliable information; to settle differences between members; to promote among them good fellowship and a more enlarged and friendly intercourse; and to make provision for the widows and families of deceased members." Objects similar to these are cited in most of the state laws providing for such institutions, as well as in the constitutions and by-laws of the institutions themselves.

Functions of Produce Exchanges. — Although the different exchanges vary considerably with respect to the functions that they perform, the primary functions may be enumerated as follows:

1. To provide a convenient market or trading place.
2. To regulate business dealings of members.
3. To provide a system to facilitate the settlement of trade disputes.

4. To establish uniform grades and a system of inspection.

5. To acquire and to disseminate market information.

One of the principal functions of some of the minor exchanges is to establish rules governing the granting of credit to dealers who purchase from members of the organization, and although having no direct bearing on the facilitation of marketing, some of the exchanges establish and maintain gratuity or beneficiary funds for the benefit of wives and relatives of deceased members.

Exchanges Furnish Market Places. — The maintenance of a suitable market place involves the acquirement and ownership of real estate on the part of the exchange, and some of the larger exchanges own land and buildings of considerable value. The balance sheet of the New York Produce Exchange in 1912, for example, showed real estate valued at $4,016,000, on which mortgages amounted to $1,238,000, leaving a clear property value of $2,778,000. Other assets brought the total up to $2,853,000. The ordinary exchange owns a large building or group of buildings, containing offices which are rented to the various business firms (principally members), and also an exchange room or trading floor, where business between members is transacted. The size and equipment of the trading floor vary with the commodities handled and the volume and nature of business transacted.

The trading floor of the grain exchange usually consists of two main parts: the cash market and the "pit." The cash market is provided with tables on which are displayed samples of grain, which are either consigned

to commission men or belong to dealers. The buyers go about from table to table, examining the samples, and making their bids and purchases. The pit is furnished for traders who are buying and selling futures; it takes the form of a circle of steps leading up from the outside, and down into the center. In the Chicago market, there are four such pits for future trading in wheat, corn, oats, and provisions respectively.

The butter and egg exchanges require smaller trading floors, because no provision is necessary for the displaying of samples, or for future trading, and because the members assemble for only a short time each day, carrying on the great bulk of their business in their own offices or stores. Such exchange rooms need very little equipment; they usually have a raised platform at one end of the room, upon which the chairman of the meeting stands when conducting the "call." Blackboards are also furnished on which are posted the receipts of the day and other market statistics, as well as the bids and offers made under the "call."

Methods of Trading. — In the large exchanges, such as the Chicago Board of Trade, definite trading hours are established by the rules of the association. This market "opens" at 9.30 A.M. and "closes" at 1.15 P.M., and during these hours the dealers are in constant attendance. In the grain exchanges, practically all the trading in the commodities handled by members is carried on on the floor of the exchange, rather than in the offices of the traders. The manner in which current receipts are sold by sample has already been described. In the pit where futures are bought and sold, a truly

remarkable method of transacting business has developed. The various traders call out their bids and offers, often in loud voices, and frequently by using such abbreviations of trade terms, and with such peculiar intonations, that the uninitiated can make nothing of the incessant jabbering. Sales involving thousands of dollars are consummated by a single spoken word or by a nod of the head, or by a distinctive gesture; and each party to the transaction merely jots down on a little card a memorandum of the transaction. In no other line of business, except perhaps in the stock exchange, are such important deals made with so little bickering over details, or with such implicit confidence that the contract entered into will be faithfully carried out. The market for futures in the large exchanges is "continuous"; *i.e.* trades are being made at all times during trading hours and any one may buy or sell any quantity that he wishes at any moment. This is one of the important features of speculative markets, as will be shown below. Because of the need of making sales as quickly as possible in this continuous market, the traders find it convenient to assemble together in close proximity to each other; hence the circular trading pit, which allows a maximum number of people on different levels (of steps) to see and hear each other in a minimum of space.

Trading methods are entirely different on the butter and egg exchanges. Formerly, large quantities of these commodities were bought and sold on the open exchange, but the tendency has been for a smaller and smaller proportion of the receipts in any one city to be offered for sale "on change." Butter varies in quality and gen-

eral characteristics, and as the trade becomes more discriminating, transactions are consummated more and more by private sale, or by individual bargainings. A wholesaler becomes the receiver of butter from a certain creamery; he builds up a trade with jobbers or retailers who want to receive the butter from this creamery regularly. Sometimes they are willing to pay a premium in order to get it, and the wholesaler in turn pays the creamery a premium to insure regular shipments. The whole tendency is for butter to find its way into private or special trade channels, rather than to be offered promiscuously on an open exchange. Similar conditions apply to eggs, but not quite to the same extent.

For these reasons, the quantity of butter and eggs sold on open exchanges is now inconsequential; and yet in the large markets the traders assemble each day at some fixed hour, hold a "call," talk over trade conditions with each other, and depart to their respective places of business. The object of this meeting is more to feel out market conditions than to consummate actual transactions. The call is a device for making bids and offers, partly to establish market prices or quotations, and partly to bring about actual sales. A chairman mounts the platform, before which the merchants gather, and calls for offerings of butter. Traders state quantity, quality, and price of lots they offer for sale, and these offers are posted on the blackboard or announced by the caller; bids are then called for, and these are also posted or announced. When bids coincide with offers on specific lots, sales are thereby made. This operation generally lasts but a few minutes even on the Chicago Butter and

Egg Board or the New York Mercantile Exchange. Less than 1 per cent of the receipts of butter and eggs in New York and Chicago is sold in this way, although during March and April the egg sales are fairly large. In addition to the sales made under the call, there is often a considerable amount of private trading carried on among the traders before they depart to their respective places of business. Elgin is no longer a butter market of any importance, and the meetings of the butter board are held primarily for the purpose of establishing a quotation. As described elsewhere, a large part of the country became so accustomed to trading on the basis of Elgin quotations when that market was an important butter center, that it has been found worth while to continue the practice of holding a weekly call for this purpose, in spite of the shortcomings of the method.[1]

Regulation of Business Transactions. — One of the principal reasons for the organization of merchants into exchanges in early days was to adopt regulations which would prevent illegitimate trade practices. As a general rule, the more highly organized a trade, the higher the plane of commercial morality on which business is conducted. The rules of the produce exchanges are often very voluminous and cover a wide range of practices connected with the business of marketing the commodities handled by members. Among the most important rules are those adopting uniform commissions, described in Chapter V. In those exchanges where

[1] The meaning and functions of market quotations are described in the following chapter.

future trading is carried on, detailed rules are necessary to govern the form of contracts between members, the delivery of grades on contract, the operation of warehouses, the deposit of security, etc. Penalties, either in the form of fines or expulsion, are provided for in case members violate the rules of the exchange, or stoop to uncommercial or fraudulent practices not specifically mentioned in the by-laws. Some exchanges require bonds of commission merchants for the protection of shippers and dealers. The South St. Paul Live-stock Exchange provides that each commission firm "shall be required before being permitted to transact such business to furnish the Exchange with a bond of some reliable surety company in the sum of twenty thousand dollars (same to be approved by the Board of Directors) for the purpose of protecting shippers of live-stock and for the guarantee of payments to shippers. . . ."

In an exchange like the New York Produce Exchange, where different commodities are handled, the by-laws cover general features of the organization, such as duties of officers, meetings, arbitration, etc., and a separate set of rules is adopted for each class of commodities handled, such as rules of the lard trade, rules of the grain trade, etc. In this particular exchange, the by-laws and general rules cover 265 printed pages.

Regulations Concerning Membership. — One of the principal methods employed by the exchanges to prevent uncommercial practices is to carefully supervise the admission of new members. The exchanges are in reality private associations, and are usually empowered by law to place such restrictions on membership as they

see fit. The policies of the various exchanges vary greatly in this respect according to commodities handled and need for drastic trade regulations, but on account of the conservative policy followed by some of the grain exchanges, they have been denounced as monopolies, and there has arisen a demand from some quarters for "open public markets."

The restrictions on admission of new members are of three kinds: first, the consideration of applications by one or more membership committees, and by the board of directors; second, the charging of a high fee for the issuance of a new certificate of membership; and third, the limitation of the number of members. In the New York Produce Exchange, applications for admission are first passed on by a special committee on admissions, and then by the board of managers. The by-laws state that "any respectable person, on the proposal of one member, seconded by another," shall be admitted to membership after ten days' notice of his application has been conspicuously posted upon the exchange, "if approved by the Committee on Admissions and elected by the Board of Managers, on the signing of an agreement to abide by the Charter, By-laws, and Rules of the Exchange. . . ." The Minneapolis Chamber of Commerce requires that an applicant run the gantlet of two separate membership committees, and then after his name has been posted for ten days, he shall be elected by the board of directors.

Some of the grain exchanges, as, for example, those at Duluth, Omaha, and Kansas City, set a maximum limit to the number of members. (It is 200 in each of

these cases.) The Minneapolis Chamber of Commerce for years had a limit of 550, but during 1914 this limit was removed, owing largely to criticisms of the practice on the part of outsiders. The removal of the limit has practically no effect, however, because at the same time a rule was adopted providing that $5000 must be paid to the Chamber for the issuance of a new certificate of membership, whereas the market value of a membership (in 1915) is only about $3500. Memberships in produce exchanges are transferable, so that when a new member joins he may buy a membership from one who already owns a certificate of membership. A transfer fee is usually charged, which in the case of the New York Produce Exchange is fifty dollars. It follows that memberships have a commercial value, and that as long as this commercial value is less than the original value set by the exchange, a person applying for admission will purchase a certificate from some member who is willing to sell, rather than ask the exchange to issue a new certificate. Many of the exchanges now charge such high fees for new memberships that the number of memberships is practically limited to the present number, even though the rules set no definite maximum.

The opposite table indicates the number of members in ten of the leading grain exchanges, together with the approximate commercial value of a membership in 1914.

The principal reasons for maintaining high membership values are to make it necessary for an individual to have some means before assuming the financial obligations incumbent on members, and to increase the dis-

ciplinary power of the exchange over its members. The prevention of frauds and trade abuses is one of the main objects of such organizations, and it is necessary for the exchange to be able to hold some club over its members in order to enforce its rulings. If a membership is valued lightly, a trader may be willing to run the risk of expulsion in order to stoop to some illegitimate practice. If his membership has a high financial value, he will be held more easily to the rules. Expulsion from one of the large exchanges carries with it not only financial loss but business disgrace. The more severe the restrictions on admission, the greater the disgrace from expulsion. Possibly some of the grain exchanges have been unnecessarily conservative in this particular, but it is generally admitted in the grain trade that the two exchanges in Minnesota, where the values of memberships are the highest, enjoy an exceptionally good reputation throughout the country for high average of business integrity among their members.

Name of Exchange	Number of Members	Market Value of a Membership
Minneapolis Chamber of Commerce	550	$3,500
Chicago Board of Trade	1,625	2,200
New York Produce Exchange	2,000	450
Duluth Board of Trade	200	4,000
Kansas City Board of Trade	200	3,000
St. Louis Merchants Exchange	1,165	150
Omaha Grain Exchange	182	550
Commercial Exchange of Philadelphia	414	150
Toledo Produce Exchange	52	50
Milwaukee Chamber of Commerce	605	75

The other extreme, open public markets, could not be expected to yield such good results as the highly organized exchanges, especially where future trading is carried on. The trading mechanism is highly intricate and delicate, and it takes some time for the most intelligent person to become accustomed so as to use it intelligently. Furthermore, since transactions involving thousands of dollars are often consummated by a mere snap of the fingers, it is highly important not only that each member have confidence in every other member, but that the utmost care be used in admitting new members.

Arbitration of Disputes. — Some of the smaller exchanges, *incorporated under general corporation laws*, have no special powers granted them with regard to the settlement of disputes. They usually have arbitration committees, but the organizations have no power to enforce the decisions other than that which they themselves can wield over their members. The larger exchanges, on the other hand, are granted exceptional powers by state laws whereby the decisions of their arbitration boards are given the force of court orders.

The charter of the New York Produce Exchange, passed originally in 1862, provides that the board of managers shall elect an arbitration committee of five members which shall hear and decide any controversy which may arise between the members of the exchange, or even between persons who are not members of the exchange, when such disputes shall be voluntarily submitted to the arbitration committee for settlement. Except in cases involving title to real estate, " a judgment of the Supreme Court shall be rendered upon the

award made pursuant to such submission." The charter also gives the right to subpœna witnesses and hold hearings. Provision is made for the filing of the award in the office of the Clerk of the Supreme Court of the City and County of New York, whereupon a judgment may be entered, "docketed, transcript filed, and executions issued thereon, the same as authorized by law in regard to judgments in the Supreme Court." Such judgments are final, and cannot be appealed except for "frauds, collusion, or corruption of said Arbitration Committee, or some member thereof." The Minnesota law providing for the formation of grain exchanges contains similar provisions, except that a board of appeals is also provided for.

Under these statutory provisions, exchanges assume the right to discipline or expel members who refuse to submit their controversies for arbitration. The charter of the Milwaukee Chamber of Commerce specifically provides that in case of differences between members arising out of business usually transacted in the chamber, if either member refuses to submit to arbitration or to abide by the decision of the arbitration committee, he may be suspended or expelled by the board of directors. Non-members may submit to the exchange boards or not, as they see fit. If, however, such non-members agree to submit to arbitration, the awards are just as binding as if they were members. Non-members naturally hesitate to submit to exchange arbitration for fear of a biased decision. There have been numerous instances, however, where non-members have been parties to cases tried by the arbitration boards. It is said that

foreign houses have frequently submitted their disputes to the arbitration committee of the New York Produce Exchange, so sure are they of just and impartial treatment.

The principal argument in favor of granting such unusual judiciary powers to private exchanges is that so many of the disputes involve such highly technical questions that no one outside of the trades themselves could hope to be qualified to pass judgment. The main justification for the continuance of the system is that it has worked out so satisfactorily in the past. In Minneapolis, the confidence of the members of the Chamber of Commerce in their own system is so great, and the power of suspension or expulsion which may be exercised by the Chamber so serious, that there has been no disposition not to comply with the decisions. The present secretary of the Chamber says that during his term of office since 1906, it has not been necessary to file a single award with the clerk of court.

Inspection and Grading. — Since the standardization of grades is so important in efficient and economical marketing, one of the first objects of organized exchanges has always been to fix definite grades for the commodities handled, and to establish systems of inspection to maintain such standards. Since trading is performed on many exchanges by sample, or by merely naming the grade, and since careful grading is absolutely essential to future trading, this matter is of supreme importance in certain trades. So far as the grain trade is concerned, however, a few of the most important primary-market states have assumed this function themselves, thus

taking it out of the hands of the grain exchanges in those states.[1] In the seaboard cities, the grading and inspection of grain is still carried on by the produce exchanges themselves.

The New York Produce Exchange, for example, defines the grades of grain in its rules and maintains an inspection department to determine the grade of actual grain on arrival or in warehouses. In connection with the inspection service, the weighing of grain is also undertaken, a function also assumed by the states themselves in some cases. The New York Exchange also maintains a flour inspection and weighing service and a chemist to analyze cotton-seed products. The butter and egg exchanges also perform an important function in standardizing the grades of commodities they handle. The New York Mercantile Exchange has two important committees to make rules governing transactions in butter and eggs respectively. Butter is " scored " on the basis of 100 points, and the butter committee establishes the grades, known as " extras," " firsts," " seconds," and " thirds," specifying just what butter must score to be included in each grade, and further specifying the flavor, body, color, saltiness, and style of package necessary to allow butter to attain the scores included in the various grades. The butter and egg boards also appoint official inspectors to score butter, but only when requested to do so.

Collection and Dissemination of Market Information. —This function includes not only the maintenance of facilities for the interchange of current prices and market

[1] See Chapter XVII.

information with other markets, but also, in some cases, the preparation of comprehensive statistical data issued in the form of annual reports. Space is provided for the operators of telegraph companies on the floors of the exchanges, and huge blackboards are provided for posting the information from other markets as it arrives by wire. Special operators watch the future trading in the pits continuously during trading hours, and send broadcast to other markets reports of price fluctuations. A special feature of the Minneapolis Chamber of Commerce is the illuminated "clock," where pit trades are immediately recorded, so that all dealers in the exchange, including the cash buyers and sellers, can see at any moment the price of the ruling future.

As for the preparation and publication of statistical data, some of the exchanges prepare only statistics of commodities handled by members of the exchange, whereas others prepare general trade statistics which have any bearing on the business of members. The annual report of the Chicago Board of Trade contains about 200 pages of statistics showing price movements, receipts and shipments, exports and imports, general agricultural statistics, etc. The reports of the grain exchanges are the best source of detailed information with regard to price movements of grain — in detail for the year under review, and summarized statements and averages for previous years. The expenses of the statistical department of the New York Produce Exchange in 1911 were over $43,000, of which $13,000 was for salaries and wages and $28,000 for telegraphic service.

Regulations Governing Granting of Credit. — In some of the smaller produce exchanges, especially in cities where the various trades have not become greatly differentiated according to commodities handled, one of the principal functions is to regulate credit transactions of members. One of the great perplexities of the wholesale produce trade is to make retailers pay their bills promptly. A good example of organized effort in this direction is furnished by the Minneapolis Produce Exchange, an organization of wholesale produce dealers who handle a large variety of fruits, vegetables, dairy and poultry products. In their capacity as dealers in dairy and poultry products, they maintain a small trading room and have short daily meetings, but the most important function performed by the organization is the regulation of credit transactions with retailers. A rule is adopted requiring retailers to pay their bills by a certain day each week; retailers who have not paid by that time are put on the "C.O.D. list," *i.e.* no further credit will be granted until unpaid bills have been settled. Although objected to strenuously by retailers at first, it has been found to encourage better merchandising methods and has come to be accepted by the retailers themselves as a serviceable device.

Other examples are found in Baltimore, Md., where there are two associations of wholesale dealers which have credit systems, viz., the Baltimore Fruit and Produce Association, which is composed largely of receivers of dairy and poultry products, and the Baltimore Produce Jobbers' Association, which includes the dealers in fruits and vegetables. The former association performs other

duties of produce exchanges, whereas the functions of the latter are so limited as to make it primarily a credit association. In this connection may also be mentioned the Fruit and Produce Trade Association of New York City, which in addition to other activities undertaken for the general benefit of the trade, has a credit department which "rates" the firms who buy from members, and which assists in adjusting claims against buyers on account of delinquencies, short payments, etc. This association also maintains a coöperative collection service which has been of great value to its members.

Gratuity Funds. — The organization of traders into exchanges offers a convenient opportunity to maintain an insurance department for members. This feature is common in the older exchanges, in some of which it is of considerable importance, and results in the payment of large aggregate amounts of money to beneficiaries when members die. According to the 1912 report of the New York Produce Exchange, there were over 1800 subscribers to the gratuity fund; a total of $453,000 had been paid to beneficiaries during the preceding year on account of seventy-one deaths. Funds are raised largely by assessment, but there is also a surplus fund of about $800,000 invested in bonds and mortgages. The Boston Fruit and Produce Exchange has a separately incorporated beneficiary association with 505 members. When a member dies, each of the other members is assessed two dollars, thus yielding about $1000 to be paid to the family of the deceased. Each member also pays one dollar per year to cover expenses of the association. The average number of deaths for twenty-three

years has been five and six tenths per year, and the total amount paid since incorporation $105,956.

Exchanges as Efficient Marketing Organizations. — In conclusion, a word should be said of the importance of produce exchanges in the general scheme of marketing. On the whole, they represent the highest type of organization and the highest development of efficiency in marketing that can be found. Their importance varies in the different trades, and the handlers of some commodities are hardly organized at all. Coöperation of merchants through exchanges brings about a higher degree of standardization of methods and commodities, elevates the plane of commercial ethics, develops a greater degree of efficiency among members, and hence tends to reduce the cost of marketing. The feeling among some people that such organizations mean monopoly power is based on a misconception of the functions and methods of exchanges. It is true that there have been instances where the members of an exchange have stooped to certain monopolistic practices, such as the manipulation of prices or quotations, but on the whole, the concentration of trading in an organized market place results in greater intensity of competition, a more adequate balancing of expert opinions, and consequently a market price that more accurately reflects the actual conditions of demand and supply.[1]

Trade Associations. — As explained at the beginning of this chapter, those organizations that are referred to herein as trade associations differ from produce exchanges in that they include in their membership dealers in a

[1] Compare with discussion of market prices, Chapter XI, pp. 253–6.

single trade or closely allied trades located in different parts of the country, rather than in a single market. They do not furnish facilities for marketing, such as trading rooms, means for collection and dissemination of prices, etc., but attend to matters of general interest to the trade, such as state and federal legislation, railroad rates and facilities, etc. Many of them provide means for arbitrating trade disputes; some make a special point of trying to establish uniform grades and packages in the different markets; others maintain claim bureaus which attend to the collection of damage claims from railroads for members; all of them have for one of their principal aims the development of honest trade practices and the weeding out of unscrupulous dealers. Firms of good reputation are usually the leaders in these organizations, and they realize that the promotion of honesty is of benefit not only to themselves but to their trades, in which they take just pride.

One of the important trade associations is the National League of Commission Merchants, which was organized in 1893, and which now has 403 firms as members, located in 30 branch organizations and representing 39 cities. This association employs a business manager who gives his whole time to the duties of his office. A good idea of the activities of the league may be derived from the following list of topics covered by the business manager in his annual report for 1914:[1] Publicity and advertising; traffic and transportation; state and federal legislation,

[1] Report of the Twenty-Third Annual Convention of the National League of Commission Merchants of the United States, R. S. French, Business Manager, 90 West Broadway, New York City.

including cold-storage legislation; standardization of weights and measures; telephone and telegraph tolls and services; the collection of claims; representation at meetings of other organizations. In dealing with legislative matters the league sends representatives to attend legislative hearings; in dealing with transportation questions it files complaints with the Interstate Commerce Commission and appears through representatives to press these complaints; in handling claims, the business manager's office received 356 claims from members during 1914 which were given expert attention. Special committees give consideration to problems connected with legislation, transportation, refrigerator car lines, butter and egg interests, telephone and telegraph, and weights and measures. The league holds an annual convention, where matters vital to the fruit and produce trade are discussed.

Such trade associations as this are doing important work in looking after the interests of the various trades, in standardizing trade practices, in eliminating undesirable features, and in generally improving market conditions. The foregoing description gives a general idea of their functions, but several others might be mentioned, such as the National Poultry, Butter, and Egg Association, the Western Jobbers' Association, the International Apple Shippers' Association, the National Grain Dealers' Association, the National Council of Grain Exchanges, the National Hay Dealers' Association, International Milk Dealers' Association, American Warehousemen's Association. In addition to these large associations there are numerous state associations, especially among the grain dealers and the butter, egg, and poultry dealers.

CHAPTER XIV

PRICE QUOTATIONS

Meaning of Quotations. — An attempt has been made in Chapter XII to explain some of the factors influencing the formation or determination of prices in the market. In individual transactions traders are concerned primarily in selling at the highest or buying at the lowest price possible, as the case may be, but it works out that in any single wholesale market, the prices paid for the same quality of a given commodity are very nearly the same at any one time. In other words, there is a fairly definite market price. It is of great importance, not only to traders within the market, but to traders in other markets, and more especially to farmers and country shippers, to know what the current market price is from day to day. Consequently, methods have been devised for finding out what the current market prices of various commodities are, and the information thus obtained is sent broadcast throughout the country in the form of price or market quotations. If determined correctly, market quotations correspond with the prices actually paid in the market; if determined incorrectly, either because of incompetence or partiality, the quotations may not correspond to actual market values.

It is of extreme importance that price quotations be

determined with accuracy and impartiality. Country shippers have to rely largely on the published quotations in order to gauge the value of their commodities and to know when to ship. It is therefore necessary to have some system of determining and issuing quotations which represents a trade as a whole, rather than individual firms or cliques of firms having a common interest. Wholesale receivers, for example, might naturally like to have the market underquoted so far as quotations sent to the country are concerned; and jobbers might prefer to see the market overquoted so that they may exact as high prices as possible from retail stores. In other words, there are conflicting interests within every market, and it is highly important that a well established and generally accepted as well as impartial system of obtaining quotations be devised, so that no one will be misled concerning actual market conditions.

It has been shown that there are at least three different prices for the same commodity at one time, — country price, wholesale price, and retail price. A good example of country price quotations is found in the price cards sent out from Minneapolis showing the prices that country elevators may pay for grain at various points. Cash buyers of eggs, poultry, etc., in the country often post or publish in the local papers the prices that they are paying for produce, and these are quotations of country prices. Usually, however, country shippers are governed by price quotations from wholesale markets in large cities, and country price quotations are not of general importance. Likewise, there are no general quotations of retail prices. Each retail store sets its

own price and informs its customers through advertisements or orally. The newspapers in Baltimore, Md., during 1914 began publishing current retail prices once a week, and these might be considered retail price quotations, a service which if carefully developed might be of real value to consumers. The important quotations are those of wholesale prices, and it is these that appear on the market pages of the daily papers, in farm journals, and "price-currents."

It has already been explained that by wholesale price is meant the price of round lots of commodities at the wholesaler's place of business, and this is the price that market quotations are supposed to represent. The New York egg quotations, for example, represent the range of prices that jobbers are paying the wholesale receivers or commission men for round lots at the wholesalers' places of business. The price charged by the jobber for a single case of eggs delivered to the retailer would necessarily be higher than the wholesale quotation. Neither does the wholesale quotation ordinarily represent the price received by farmer or shipper for goods delivered in the city of the wholesaler. The shipper receives the quotation minus the commission or wholesalers' gross profit. Thus the quotation for wheat in any market represents the price paid to commission men by millers, terminal elevators, etc. The live-stock quotations represent the prices paid by packers, dealers, etc., to commission men. It is necessary to have this meaning of the wholesale price quotation clearly in mind in order to understand some of the problems connected with the determination of quotations.

Functions of Quotations. — A quotation may be used for two purposes: first, as a mere measure or indication of market values; and second, as a "trading basis" or "settling basis." The commonest use is as a measure of market values, and this function of quotations is generally understood; but it is through their use as trading bases, that quotations are of special value in facilitating the marketing of certain commodities, and it is also in this connection that some of the most perplexing and interesting problems arise. To be used as a trading basis means that the quotation is adopted as the basis of agreements to buy and sell. For example, a wholesale butter dealer in Chicago makes an agreement with an Iowa creamery to take its butter week in and week out at one half cent under the Elgin quotation, delivered Chicago. The wholesaler also makes an agreement with a jobber to sell a certain number of tubs each week from this particular creamery at say one half cent over the quotation. The jobber may in turn agree to supply a retail store with this same butter each week at two cents over the quotation. The quotation has been used as a trading basis; instead of having to make separate bargains each week, the various dealers involved simply carry out the agreements from week to week without having to higgle about prices; time is saved and less salesmanship is required. The use of the quotation as a trading basis facilitates the marketing process.

Dependence of Quotation System on Uniform Grades. — In both of its uses, and perhaps more especially as a trading basis, it is important that the quotation represent correctly some well-established quality or grade of the

commodity in question. Unless a commodity is susceptible of minute subdivision into recognized and uniform grades, the quotation is only a rough measure of market values, and is practically useless as a trading basis. It is also desirable to have the grades as "narrow" as possible, so that the quotation may be a single figure, rather than show a "range." This is seldom possible; even in the case of wheat, which is more completely divided into standardized grades than almost any other commodity, the cash quotation of No. 1 Northern, for example, shows a spread of perhaps two cents, *i.e.* the quotation may read "91 @ 93." This means that the grade is so wide that the best wheat falling within the grade is worth two cents more than the poorer wheat that just barely makes the grade. When a quotation with such a spread as this is used as a trading basis, the "top" of the spread is usually used. In New York, for example, the butter quotation for "extras" prior to October, 1914, usually showed a spread, and the "top" was generally used as a trading basis. The Elgin butter quotation is a single figure; likewise the quotations of wheat for future delivery.

The desirability of having price quotations represent definite grades has been one reason why produce exchanges have taken special pains to define and supervise the grading of commodities handled by members. Quotations are issued for the different grades of a commodity, but the quotation for some particular grade — usually the highest in quality — is used most commonly as the trading basis. An interesting problem arises in this connection; suppose that the quality of

goods marketed varies at different times of year, as in the case of eggs and butter; a quotation representing a certain grade may be satisfactory as a trading basis at one time of year, whereas at another time there may be either so little or so much of the commodity falling within this grade that the price may be either unduly inflated or depressed, thus detracting from the serviceability of the quotation as a trading basis. This difficulty will be explained more fully below in the discussion of butter quotations. It is also apparent that there is great need that grades be uniform in different markets; that the New York quotation for "firsts" should represent the same quality of eggs as the Chicago quotation for this grade.

How Quotations Are Determined. — It is not such an easy matter to ascertain actual market prices, and hence to arrive at accurate quotations, as one might at first thought imagine. The difficulty varies, however, with different commodities, depending on how the trade is organized and how and where goods are bought and sold. In general, the methods of selling at wholesale may be classified into three types: First, where all, or practically all, of the buying and selling is done in an organized market place where all the traders come together, as in the grain exchange, or the auction room, or the stockyards; obviously, it is a comparatively easy matter to ascertain current market prices under such conditions. Second, where part of the trading is done openly on an exchange, but where the great majority of transactions are consummated by means of individual bargainings outside of the exchange and in the various private offices

of the wholesale dealers, as in the butter, egg, and cheese trades; under such circumstances the transactions on the open exchange may or may not furnish an adequate index of actual market values, as will appear below. And third, where all trading is carried on by private sale; in order to arrive at an accurate quotation in this case, it is necessary to collect information from a large number of dealers in the wholesale district, the accuracy of the resulting quotation depending both on the ability of those who gather the information and on the honesty of the dealers in giving out information.

With these factors affecting the ease or difficulty of arriving at accurate quotations in mind, it is now possible to consider the principal methods actually used for determining quotations in the various trades and in different cities. These methods may be enumerated as follows:

1. By observation of actual sales in an organized market place.

2. By transactions or bids and offers during a " call."

3. By a quotation committee composed of members of an exchange or sometimes by vote of all members present at exchange meeting.

4. By reports from members of an exchange to the secretary, who in turn bases the quotation on these reports.

5. By wholesale dealers themselves, each acting independently.

6. By independent market reporters.

Quotations Based on Actual Sales on an Exchange. — In an organized market place where there is a continuous

market during trading hours, as in a large grain exchange, the problem of arriving at quotations is relatively simple; every one in the exchange knows the current price at any moment. When the price varies from hour to hour there is the question of obtaining and recording the quotation at certain times, but under these circumstances it is the closing quotation of the day that is of the most importance. Since a large part of the day's business may be transacted during the early hours, it may be difficult in some cases to find enough transactions during the closing hour on which to base the quotation. In the Minneapolis Chamber of Commerce there is a special committee whose duty it is to ascertain closing prices, but this committee has no arbitrary power, and bases its quotations on actual trades; prices are public property to such an extent that such a committee could not issue quotations that do not coincide with actual market values if it desired to do so. As for quotations of future prices, an operator sits on a raised platform beside the pit and records the actual sales as they are made, telegraphing the prices immediately to other markets.

In the live-stock market, although buyers and sellers do not consummate their transactions in such an open manner as on the grain exchange, nevertheless trading is confined to such a small area that all dealers know the prevailing market prices, and it is an easy matter to ascertain these prices for the purpose of arriving at quotations. The live-stock quotations are usually issued as records of actual sales, although this service is performed by market reporters rather than officially by the live-stock exchange itself. This matter will be referred

to again below. In the auction sales prices are public. property, and the auction prices of oranges and other fruits often serve as bases for quotations.

The Call-board Method. — In the chapter on Produce Exchanges it is explained that although less than 1 per cent of the receipts of eggs and butter is traded on the exchanges even in the largest cities, the traders come together daily to feel out market conditions and usually to hold a " call " [1] largely for the purpose of arriving at a quotation. When there are very few transactions consummated on an exchange, the prices of such transactions are apt to be an incorrect index of actual market values, especially as manipulation of prices under the call is sometimes possible. If a dealer has a large quantity of butter on hand which he wishes to sell, it may pay him to bid up the price on the exchange, and in that way set an unnaturally high market price for the day, which will enable him to unload his large holdings at an unfair profit. This sort of manipulation is not as easy as one might imagine, however, and even if a large operator should succeed in driving up the price under the call, it does not necessarily follow that he can sell his goods at the quotation. If buyers think the quotation too high, they will not be governed by it; there is nothing compulsory about the use of a quotation. The call-board method is still used, however, on some exchanges. The Elgin butter quotation is determined by actual sales under a weekly call, as described more at length below. In 1912 there were eight dairy boards in Wisconsin where cheese was offered for sale, and on them

[1] The "call" is described in the chapter on Produce Exchanges, p. 270.

the call-board method prevails.[1] The call in this case amounts practically to an auction, because the sellers merely list their offerings, without setting prices. Only about 10 per cent of the cheese is offered for sale on the boards, however, and it is alleged that dealers oftentimes control call-board prices by agreement among themselves. These dealers buy most of their cheese under contracts with prices expressed in terms of the quotation, which they naturally desire to see depressed as much as possible. If a large proportion of the receipts of a commodity in any market were traded under the call, this method would undoubtedly be satisfactory. But the whole tendency is for goods to find their way more and more into private channels, and as this continues, the call-board method becomes less and less satisfactory.

Quotation Committees. — Realizing that the bids and offers under the call do not give a correct index of market values, most of the butter and egg exchanges have at one time or another adopted the method of appointing a quotation committee to decide on the daily quotations. Theoretically, since quotation committees are composed of dealers who are in the best possible position to know market conditions, this method might be expected to result in a fair and correct quotation; practically, the results have not been satisfactory, and furthermore this method has met legal obstacles so that it has been absolutely prohibited in some states. To allow a committee to fix quotations, means the granting of an

[1] See Taylor, Schoenfeld, and Wehrwein, The Marketing of Wisconsin Cheese, p. 10.

important arbitrary power to a few men. If these men were disinterested and at the same time thoroughly conversant with trade conditions, we might expect an impartial quotation, but as a matter of fact each trader is actuated by his own personal motives, and if the committee, or the exchange that selects the committee, is dominated by one set of interests as opposed to others within the market, the quotation may be affected by the personal interests of the members.

This is what occurred in the New York Mercantile Exchange, where the wholesale receivers dominated the affairs of the quotation committee. These receivers were interested primarily in their relations with country creameries from whom they were receiving large quantities of butter under agreements with prices expressed in terms of the quotation, and naturally they desired to see the market quoted at as low a figure as possible. As a result, the New York quotation came to represent prices somewhat below true market values; it was still used as a trading basis, but the practice of paying large premiums over the quotation came into vogue; jobbers had difficulty in obtaining fair prices from retailers, because they could not make them understand why they had to pay so much higher than the quotation; it was further alleged that on a rising market the committee would sometimes keep the quotation down for a day or two, and then advance it suddenly, thus enabling the receivers to take butter from the country under the low quotations, and then unload two or three days later at the higher quotations.

The committee system had been adopted in New York

in 1903; in 1907 a case was brought against the exchange, charging that it was maliciously and fraudulently giving out false information. As a result the exchange was enjoined from issuing any quotation that did not represent the value of goods as indicated by actual wholesale sales by first-hand receivers. Since the sales on the floor of the exchange were so small, it decided that it could not follow this order to the satisfaction of the court and decided to issue no official quotation at all. This threw the making of the quotation into the hands of outside market reporters, as explained below.

Similar experiences occurred in Elgin and Chicago. Elgin has long since ceased to be an important butter market, but the Elgin Butter Board continued to make quotations through a committee. The Chicago Butter and Egg Board also employed the committee system. Finally, these boards were prohibited by the courts from issuing quotations, except as determined by actual sales, on the ground that the actions of the committee amounted to combination in restraint of trade. The Chicago Board ceased issuing an official quotation, thus turning this function over to independent market reporters, as in New York. Since there is no real butter market at Elgin, this meant that if the board at that place should discontinue, there would no longer be any Elgin butter quotation. But such a large part of the country had become accustomed to using the Elgin market as a trading basis, that the issuing of a quotation has been continued, determined however by actual sales made at the weekly meeting of the board. Butter dealers in Chicago journey out to Elgin once a week, make bids

and offers under a call, sell a few tubs, and thereby establish the well-known Elgin butter quotation.

The committee system still prevails in some cities. In Boston, for example, there are three different quotations on butter and eggs. The Boston Chamber of Commerce, an amalgamation of trade organizations that were once independent, has a committee which issues quotations on butter. This committee is dominated by heavy receivers, and it is to their interest to have the market underquoted if anything; the Boston Fruit and Produce Exchange also has a quotation committee, which represents more varied interests in the trade, but which, if partial at all, has in mind more the relations with the jobbing and retail trades. As a result, when there is any difference between the two quotations — and there often is — the Fruit and Produce Exchange quotation is apt to be slightly higher than the Chamber of Commerce quotation. The third quotation is one arrived at by a company of independent market reporters. Such a situation is unfortunate; it is much better to have one single well-recognized quotation in each market than two or three different ones.

A quotation committee in arriving at a quotation holds a formal meeting behind closed doors; a member makes a motion that the egg quotation for "firsts" be a certain figure; oftentimes there is complete agreement, and the matter is decided quickly; at other times there is considerable debate, and the vote is often close. At one meeting of a quotation committee which the writer was permitted to attend, the chairman had to cast his vote in some instances to break a tie. In the Philadelphia

Produce Exchange, where butter and egg sales are seldom made on " change," the quotations are determined by a vote of all members present. It is even decided in this way whether the market shall officially be declared " strong " or "steady " or " weak," as the case may be. This method of determining a quotation is very uncommon.

Quotations Based on Reports of Members to Secretary of Exchange. — In some cases quotations are arrived at by having members of an exchange report their transactions to the secretary, who in turn averages the prices and issues the official quotation. This is the practice followed by the Minneapolis Hay Board of Trade; the hay market is held each morning on the special " hay tracks " provided by the railroads; the various members report their sales — quantities, grades, and prices — to the secretary, who in turn issues the official quotations. In the neighboring city of St. Paul, a different method is followed; there the hay dealers meet in an office each morning, make their bids and offers, and consummate a few transactions. If actual sales are made, the prices paid become the quotations; if no sales are made, the quotation is based on the bids and offers. In other words, the call-board method is used. In the Utica (N. Y.) Dairy Board of Trade, composed of cheese dealers, the members report their purchases to the secretary, who thereupon issues the official cheese quotations; it appears, however, that sales are commonly made after the issuance of the quotation at prices ranging from one fourth to one half cent over the quotation, which would seem to indicate that members do

not report their true purchases, or at least fail to report the prices at which the best grades of cheese are purchased. Both the committee system and the call-board method also appear to be in use in other cheese boards in New York state.[1]

Quotations Issued by Wholesalers Individually. — In minor markets where the volume of business is insufficient to warrant the establishment of an official quotation system, or where it does not pay an outside firm of market reporters to undertake this function, wholesale dealers frequently send out their own quotations. This is done at some of the smaller concentrating points in the Middle West and South, especially among those who are soliciting shipments of eggs and poultry. Thoroughly honest dealers can and do send out reliable quotations which give shippers an accurate idea of the prices they may receive for their products provided, of course, actual changes in conditions do not occur before goods reach market. The difficulty is that when there is no well-established quotation for any given market, the way is left open for dishonest dealers to overquote the market for the purpose of inducing heavy shipments, and then to claim that the price has broken or that the goods are out of condition, or that a certain number of birds, in the case of poultry, have died in transit, and thereupon to make returns at less than the quoted price. Instances have occurred where dealers have offered exceptionally high prices for a short time, induced heavy shipments from ignorant farmers and

[1] See *New York Produce Review*, May 12, 1915, p. 150, and editorial comment in same issue.

shippers, and then sold out without making any returns at all. Some of the trade papers frequently give instances of these various practices; a number have occurred during 1914 and 1915 in Texas and the Southwest.

Quotations Issued by Market Reporters. — In a market of any size the issuance of quotations by individual wholesalers results not only in imperfect quotations but in duplication of effort and expense. Except in those cases where this function has been taken over by organized exchanges, the function of determining and issuing quotations has usually devolved on independent firms of market reporters. The origin of the market reporter system in New York City, where it has reached perhaps the highest degree of perfection, throws light on the need and usefulness of the system. In the early days of the wholesale produce trade in that city each dealer was in the habit of notifying his customers of the prices that obtained in the New York market, by sending out little sheets or circulars showing the prices of different commodities, and a large part of the printing of these circulars happened to be done by a printer named Benjamin Urner, the father of F. G. Urner, now vice president of the Urner-Barry Company, market reporters and publishers of New York City to-day. Mr. Urner conceived the idea of going through the market himself to determine prices, and to publish a price list or "price current" on his own account, for the purpose of furnishing more accurate quotations, and of selling the service to the various dealers and thereby save them money. It was about 1858 when Mr. Urner first started this

service, and many of the produce dealers immediately began to use his publication to send out to customers instead of their own individual quotations. At first, the price current appeared weekly, but in 1882 it was changed to a daily service. "*The Producers' Price Current*," as it is called, has been in continuous existence since its first establishment in 1858, and has always been recognized as the best statement of New York market prices and conditions.

In 1873, Mr. L. F. Barry, now president of the Urner-Barry Company, started a similar and competing service, but in 1895 the two companies consolidated into the Urner-Barry Company, and at the same time began publishing the *New York Produce Review and American Creamery*, a most excellent marketing journal, devoted mainly to the butter, egg, cheese, and poultry interests.

Market reporters get their information by going about through the trade and talking with the various dealers, and the degree of success that they achieve depends partly on the honesty and frankness of the dealers, but more especially on the ability, experience, and disinterestedness of the reporters themselves. Accurate market reporting is a science; it requires a thorough knowledge not only of methods of marketing, general statistics of prices and crop movements, etc., but also a most intimate personal knowledge of the various dealers themselves, — qualifications that can be acquired only by long experience and personal contact with the market. An experienced reporter acquires a sixth sense that enables him to size up market conditions intuitively; he knows the personal interest of each dealer and makes

due allowances for such reports as are made to him; a thousand and one little incidents, remarks, attitudes, which would pass unnoticed by the uninitiated, are full of meaning to him; in fact he can usually tell whether the market is steady, or up half a cent, or sagging half a cent, without even seeing records of actual sales. The reporter who decides on the New York butter quotation, for example, has been "doing the market" for over thirty years. The Urner-Barry Company has eight such skilled appraisers of market values determining quotations of different commodities every day; and each reporter has an understudy who can immediately take his place, so that the system is permanent and cannot suffer seriously from the retirement of those who have had the most experience.

In a market of such great importance as the New York market, where the prices of many commodities are basic for other parts of the country, it is apparent that there is great need of absolute honesty and disinterestedness on the part of the reporters engaged in this work. It seems rather remarkable that the New York quotations for butter and eggs, for example, which through their use as trading bases, largely influence the prices from day to day that shippers receive, that retailers pay, and even that consumers pay, should be in the hands of a private company, which has it in its power to affect prices all over the United States within a narrow range and for short periods. If this power were used in the slightest degree, results might be serious, although it should be borne in mind that quotations are used as trading bases for only a few commodities, and for only a

part of these, because great quantities are sold under private negotiation, without reference to the quotation. Furthermore, even suspicions among dealers that the reporting company would stoop to illegitimate practices would destroy confidence in the quotations and would lead to their disuse. So far as the system in New York is concerned, the fact that the quotations are unqualifiedly accepted as the best possible measures of market values under existing conditions, is pretty conclusive evidence of the high standard of honesty and disinterestedness set by the market-reporting company in that city. Although misgivings and accusations are frequently voiced by those who do not understand the system, the writer cannot refrain from stating that fairly careful personal investigations of the methods of the Urner-Barry Company, and of the attitudes of the various dealers, have convinced him that the confidence reposed in this company is very highly deserved. This does not mean that there are no imperfections in the present system in New York City, but no one realizes this better, or is making such earnest and intelligent efforts to perfect the system, as the Urner-Barry Company itself, which has a complete appreciation of the responsibilities resting on its shoulders.

Although highly efficient firms of market reporters have developed in other places, it cannot be said that the same high standard of market reporting has been reached in all American cities. This is especially true in smaller cities where the quotations are of rather local significance, and where one individual often covers all commodities. In such cases, the quotations often do

not receive sufficient attention, and they are sometimes allowed to stand unchanged for several days at a time without taking cognizance of market fluctuations. In Minneapolis, for example, quotations often fail to represent with any degree of accuracy the values of minor products, especially during periods of rapid price fluctuations. Furthermore, the market reporter in such a city, although frequently independent financially of actual trading in the market, often, unconsciously perhaps, is influenced by the interests and desires of the wholesalers on whom he is dependent financially through the sale of his price currents or market sheets. It frequently occurs that in small cities such wholesalers are interested mainly in the sale of products to local retailers and retailers in surrounding towns, so that the market is often overquoted. Under such circumstances it cannot be said that the market reporter sets a very high standard of disinterestedness. In other cases, the market-reporting firm is occasionally affiliated financially with important interests in the market. In the South St. Paul live-stock market, for example, the quotations are obtained and issued by the *South St. Paul Daily Reporter*, a paper which is owned by Swift and Company, the only important buyer in that market. The quotations for the most part, however, take the form of reports of actual sales, and little if any criticism can be made of such reports, but in the case of fat cattle ready for slaughter, this paper commonly quotes prices for choice stock at higher prices than are actually paid on the market, representing prices, it is explained, that Swift and Company " would be willing to pay " for stock of

sufficiently choice quality. Since these quotations are accompanied by records of actual sales, there is perhaps no great harm done, but country shippers who do not understand the situation are apt to be misled as to prices that they may expect to receive for their stock, and consequently they are sometimes disappointed when their returns come in.

Butter Quotations. — Among the most important and most interesting quotations are those representing butter prices, especially in view of the publicity given to the Elgin, Chicago, and New York quotations, through litigation in the courts. Butter quotations also furnish the best example of the use of quotations as trading bases. As for the Elgin quotation, it has been explained that there is no butter market of importance at Elgin; that the courts caused the abandonment of the committee system and that quotations are now determined by actual sales under a weekly call; and that the principal reason for having the quotation at all is that such a large part of the country has become accustomed to the use of the quotation that there has been a demand for its continuance. Creameries in Illinois, Wisconsin, Iowa, and other Central-Western states (not including Minnesota) still sell on the basis of this quotation; and dealers in large markets throughout the Central and Southern states and even on the Atlantic coast in Baltimore and south thereof commonly use it. It remains to consider the accuracy of this quotation as a measure of actual market values. Two incidents in 1915 throw light on this question.

The *Chicago Dairy Produce* in its issue of Jan. 12, 1915,

said editorially as follows: "If the government wants another turn at the Elgin Board of Trade it could make use of the occurrence on Saturday, Jan. 2, when, according to majority sales, the price for last week was 33 cents. . . . But it was not in reality a 33 cent market." The editorial goes on to explain that although the majority of sales were made at 33 cents, there were 45 tubs sold at 34 cents, and that one dealer bid 34 cents for 150 tubs without finding a seller, in spite of the fact that 121 tubs had been offered for sale and sold at 33 cents. It also asserts that "There are occasions, and the Jan. 2nd board meeting was one of them, when majority sales do not give a fair statement of the market."

The Elgin quotation is for but one grade of butter, that of "extras," and only this grade is offered and bid under the weekly call. Oftentimes there are sales at different prices, and in order to avoid a split quotation (a single figure is preferable for a quotation that is to be used as a trading basis) the rule was followed that the "majority" sales should govern. This practice led to a peculiar situation on April 10, 1915, when 100 tubs were sold at 29½ cents, 75 at 30½, and 170 tubs at 31½ cents, and 50 tubs offered at 29½ cents did not find buyers! The *Elgin Dairy Report* issued the quotation as follows: "Elgin price for week based on majority sales 31½ cents." The trade immediately pointed out that the 170 tubs sold at 31½ cents did not constitute a majority of the sales, because 175 tubs sold at lower prices, and there followed some dispute as to what the Elgin quotation really should have been. The following week the *Elgin Dairy Report* issued its quotation as 32 cents "based on *predominant* sales!"

These incidents illustrate sufficiently the shortcomings of a quotation based on actual sales on an exchange where the quantity of butter sold is insignificant, and especially when these sales are made merely for the sake of arriving at a quotation. In other words, quotations should be based on actual trading transactions in a natural market place rather than on artificial sales made not with the idea of carrying on regular trading, but for the sole purpose of arriving at a quotation. Add to this the fact that the Elgin quotation is made only once a week, whereas the price of butter frequently fluctuates considerably within a week, and it must be apparent that this quotation is only the roughest sort of an indication of actual market values. It seems rather surprising that such a quotation should be used so extensively in a trade where the commodity in question is handled on such small margins.

In contrast to the Elgin quotation is the New York butter quotation. This is determined every day; the market reporter studies statistics of receipts, storage holdings, etc., in an actual market place; attends the meeting of the exchange, listens to the bids and offers under the call, and talks with the various traders; and he then goes out into the "street" visiting the various houses and finds out what the actual conditions are. With the facts and impressions gathered in this way he acts as an expert appraiser of actual market values, and decides what the quotation shall be. The New York quotation varies from day to day, sometimes by a quarter of a cent. Dealers who are accustomed to trading on a steadier basis, like the Elgin quotation, complain that

the New York quotation is too erratic! And yet it would seem that in such a highly organized trade as the butter market, dealers should not only be willing but glad to use a quotation that reflects actual market values. As a matter of fact dealers in the New York market, in Philadelphia, Boston, and certain interior cities do use this quotation, as well as creameries in the East, and also in Minnesota, which sell their butter in eastern markets.

Premiums. — One difficulty that has always been encountered in butter quotations — and the same applies to cheese and some other commodities — is the payment of premiums. At first blush it would appear as *prima facie* evidence that the quotation is not determined correctly if wholesale receivers pay creameries a half cent over quotation, especially as the quotation is supposed to represent the price for which receivers sell to jobbers, which must be higher than the price they pay creameries. As a matter of fact, the payment of such premiums may or may not indicate incorrectness of the quotation. In the first place many of the apparently high prices paid to country creameries are not real premiums at all. As explained in Chapter V, wholesale receivers often set the price high enough to include a 5 per cent commission, even though they are buying the butter outright themselves. Thus the wholesaler may nominally pay one cent over the quotation, and yet actually pay one half cent under, after the commission has been deducted. Although this is not a commendable practice, it is not to be confounded with true premiums, where the actual net price may be higher than the quotation.

If the actual net price paid by wholesalers to creameries is really higher than the quotation, it may be that the market is underquoted. This is what happened under the committee system in New York, and also in Elgin and Chicago, as previously explained, and such a condition is extremely unsatisfactory. The changes made during the past few years resulting from litigation have largely done away with this premium system, and yet they still continue to a certain extent. A careful study of trading methods and marketing conditions indicates, however, that premiums cannot be altogether eliminated, and that their payment under certain conditions does not indicate an unsatisfactory condition if properly understood. Even if the quotation represents the full market price of the high quality of butter that it is supposed to represent, there are still some creameries who make an especially fancy piece of butter, or who follow some particular method of packing, or otherwise comply with some specific desire on the part of wholesalers, and they are thus entitled to a slightly higher price than the average creamery, and the quotation can hardly be expected to represent these special cases. Or a creamery, though it does not make a particularly fancy article, may be able to make butter of more uniform quality throughout the year. In such a case, the wholesaler may build up a special trade with a jobber, and the jobber with a retailer, for the output of this particular creamery week in and week out, so that a slight premium may be possible all along the line to insure the regularity of shipments from this creamery. For these reasons, and for certain other special causes that might be mentioned, the

apparently anomalous condition of paying premiums over the quotation is likely to continue.

Problems Connected with New York Butter Quotation. — This account of quotations would be incomplete without reference to two very interesting problems that arise in connection with the New York butter quotation. This quotation is used to such an extent as a trading basis, as explained above, that a large proportion of the fancy butter reaching the city is traded in this way. Thousands of tubs of butter are received by the wholesalers during the forenoon under agreements based on the quotation, such as " one half cent under," or the " flat quotation." Much of this butter is immediately turned over to jobbers under similar agreements. Even when butter is not sold under such agreements, the dealers often decide on prices expressed in terms of the quotation. In other words, transactions involving thousands of dollars are consummated every forenoon, without the dealers knowing the actual prices to write into their account sales and invoices until the quotation is issued at one o'clock. The question naturally arises — if so much of the trading is done on prices *based on the quotation before it is issued*, how is the reporter to find enough open transactions at definite prices on which to base the quotation itself? For an inexperienced hand, this would be an almost insurmountable difficulty, although as a matter of fact a certain amount of open trading can usually be found. During the flush season there is a surplus amount of butter, and the price that this brings for storage purposes is the dominant feature in fixing the price; during the season of shortage, there is what

might be called a surplus demand, which causes those who are short of butter to bid up the price to induce butter from its regular channels, — and it is this extra demand that furnishes the index for making the quotation. Nevertheless, this situation illustrates the difficulties encountered by the market reporters, and throws some light on the need of a high degree of ability and large amount of experience; it may also be of interest to students who are interested in constructing adequate explanations of market prices.

The other problem is in connection with the grade of butter that the quotation shall represent. It has already been suggested that when the quality of a commodity varies from month to month, there may be a variation in the amount of the receipts falling within the grade the quotation for which is used as a trading basis. For example, if butter must score ninety-three to grade extras in June, a considerable proportion of the butter marketed may reach this grade during that month, and the quotation for extras may be a reasonable index of average fancy butter. If, however, the score of ninety-three is used in December, there may be less than 5 per cent of the receipts which reach this grade; and if the market is correctly reported, the quotation of extras may be so much higher than the value of the average fancy butter arriving at market at that time, as to preclude the use of the quotation as a trading basis.

The New York Mercantile Exchange has sought to solve this difficulty by establishing a sliding scale of scores as a basis for the grades. Butter must score either ninety-three, ninety-two, or ninety-one in order

to grade extras, as determined by the butter committee of the exchange. In June, for example, the ninety-three basis is in use; as butter receipts begin to deteriorate, the committee puts the ninety-two basis into effect, and changes the basis in this way with the idea of allowing a fairly constant proportion of the receipts to fall within the basic grade of extras at all times of year. A similar difficulty is met in the egg quotations, and the solution adopted in New York is also similar. It would appear at first blush that this system would put a good deal of arbitrary power into the hands of the butter committee, but although it is still only on trial, it appears to be yielding satisfactory results; it might also be claimed that this method is preferable to the one used in Chicago where the rules of the Butter and Egg Board call for a score of ninety-three for extras throughout the year, but where the winter quotations really represent ninety-one and ninety-two scoring butter rather than ninety-three. In other words the sliding scale is used in reality, although nominally a fixed basis is supposed to be maintained. It is contended by some that the sliding scale is unfair to those creameries which produce butter of uniform quality throughout the year; this may happen in some instances, but those creameries that make fancy butter month in and month out are known to the trade, and they are usually paid premiums based on the relative superiority of their output during months when fancy butter is scarce. At any rate, this objection applies as much to the unofficial and unsanctioned use of the sliding scale in Chicago as to the openly adopted system in New York.

Conclusions on Quotations. — The description of quotations in this chapter indicates that there exists a great variety of methods for determining quotations and that there are many problems still to be solved in this connection. The weaknesses that have existed and that still exist are due largely to the control of the quotation system by special classes of traders whose interests tend either to artificial underquoting or overquoting of the market, as the case may be. Either result is unsatisfactory, and the principal problem is to devise a system that will result in an impartial and accurate determination of actual market values. The most prominent feature of all the systems in use is that they are primarily in control of the dealers in the wholesale trades, the producers having nothing to say in their determination. In so far as outside market reporters are really independent of the trades, this difficulty is largely overcome, but even in such cases, it has been shown that such reporters are apt to be prompted by the desires of the wholesalers, and in any case they are looked on with more or less distrust by distant shippers.

The same difficulties have appeared in foreign markets. The Copenhagen butter quotation, on the basis of which England buys much of her butter, has been determined by the committee method for years, the committee using reports of actual sales as the basis for determination. The market was underquoted, the premium evil appeared, and dissatisfaction resulted. The committee system was then revised to allow representation of the creameries as well as of the wholesale trade, but this did not work out satisfactorily, and the producers finally

broke away and established their own quotation system, based on weekly sales reports of creameries. The wholesalers still continue their quotation, which is usually a little lower than that of the creameries, but which is still used as a trading basis to a much greater extent than the other. So it cannot be said that the quotation problem has been solved there, and similar conditions exist in other European cities.[1]

The problem does not apply primarily to those commodities that are traded openly on exchanges, because under such conditions market prices are easy to determine, but rather to those commodities that are sold entirely or almost entirely by private sale. It has been suggested that public market authorities be given the power to issue quotations based on sworn statements of prices received by traders, and that shall be binding in the consummation of all transactions. Such a system would be impossible; no quotation is or can be made binding on the traders, who merely use the quotations as guides or as trading bases when they voluntarily desire to do so. It has been suggested that a committee of appraisers be appointed which shall include traders, market reporters, and in lieu of representatives of producers, government officials. This method looks attractive, and possibly would work out satisfactorily, but it must be remembered that a market reporter is qualified for his work only if he lives in the trade and has had ample experience. It is questionable whether government officials would be so qualified — and if they were not, any arbitrary power that they might have over the

[1] See *New York Produce Review and American Creamery*, March 3, 1915.

determination of a quotation would probably yield unfortunate, not to say vicious, results.

Under present conditions, the best results have been attained by independent market reporters, especially in certain cities where the exercising of this function has reached a high degree of perfection, and scientific studies of quotation systems have not proceeded far enough as yet to furnish a basis for proposal of any radical changes. The government (either federal or state) can be of great assistance in developing methods of collecting and disseminating statistics and other facts reflecting market conditions, and thereby furnishing a more adequate basis for both the determination and interpretation of quotations, and it can also exercise its influence by studying present methods to determine their weaknesses, which may be cured either by publicity or by legal action where possible. Any more intimate relation than this on the part of the government might well be considered unnecessary or unwise, at least in view of the knowledge, or lack of knowledge, existing on this subject at present.[1]

[1] There may be certain special cases where the government may be justified in taking a hand in the determination of quotations. A case in point is found in the United States Cotton Futures Act which prescribes the method whereby spot quotations of the different grades of cotton shall be ascertained in order to carry out the provision that settlements shall be made under the system of "commercial differences" as explained in Chapter XV. This does not mean, however, that the government is supervising the determination of the ordinary quotations from day to day.

CHAPTER XV

FUTURE TRADING

As the term implies, a future trade, or simply a "future," means a transaction which calls for delivery at some future time. Contracts calling for delivery of goods in the future are fairly common in all lines of trade, as, for instance, when a manufacturer contracts to deliver a finished product at a stipulated price by a certain date. In the case of certain agricultural products, notably grains and cotton, which have a world market, and the prices of which fluctuate under competitive conditions from day to day and even from hour to hour, future trading has become very prevalent. The constantly fluctuating prices offer opportunity for speculation, as for instance, where a person buys cotton, not with the expectation of using it himself, but with the idea of reselling it at a profit. One may speculate by buying the commodity itself, and holding for resale, as does a horse-trader or the purchaser of a piece of real estate, or, in the case of the few commodities mentioned, he may speculate in the future prices. The future market is often called the speculative market, but, as will be pointed out below, a trader often buys or sells for future delivery for the express purpose of avoiding speculation, rather than of attempting to make a profit out of price fluctuations.

Contracts may be made for delivery during any month in the future; in the wheat trade (the following discussion refers to wheat unless otherwise specified) it has been found convenient to make contracts for delivery in either September, December, May, or July. When one buys "May" wheat, it means that he is buying wheat that will be delivered to him the following May. The seller has the option of delivering the wheat at any time during the month, and although future trades are often called "options," this is the only sense in which the term accurately applies. If a trader buys May wheat, he can be sure that the amount specified will be delivered to him during May (unless, of course, he sells it to some one else in the meantime).

The Relation of Cash Price to Future Prices. — During a single crop year the future price should be higher than the cash price at any one time by approximately the cost of carrying until the month of delivery. If it costs one half cent a bushel per month to store grain, then, if the price of cash wheat is 80 cents on the first of October, the December price at that time should normally be about 81 cents (two months of storage), and the May price about 83½ cents (seven months of storage). Various factors often cause this relation to vary, but this is the fundamental reason why future prices should be higher than cash prices. The July price, however, may be very much higher or even lower than the May price, because the new crop begins to reach market in that month, and the price of wheat for July delivery depends both on crop prospects and on the probable amount left in the warehouses from the old crop. The future prices

at any one time are estimates of experts as to what wheat will be worth at different times in the future.

Speculative Short Selling. — One may speculate in futures either by buying for future delivery with the hope of making a profit by reselling at a higher price, or by "selling short" with the hope of making a profit by buying in at a reduced price. When one buys for future delivery, he is said to be "long"; he naturally expects the price to go up, just as the buyer of a share of stock hopes that the price will rise, and consequently he uses all his influence to "bull" the market. If the price rises as he expects, he will sooner or later sell out, or "unload," or "liquidate" and take his profits. Some people are content to take small profits, whereas others hold on, believing that the price will rise still higher.

To make a speculative short sale means to contract to deliver at a future time commodities which the seller does not have in his possession at the time the sale is made. The seller's intention is to buy the commodities before the time of delivery arrives. In this sense, the manufacturer who contracts to deliver finished goods in the future, is selling short; he may not even possess the raw materials out of which to make the product that he contracts to deliver. If the seller of wheat for future delivery owns an equal amount of actual grain in an elevator, he is not making a speculative short sale; he is merely protecting the actual grain by hedging it, which will be explained below. So far as the market for futures is concerned, however, he appears as a short seller. When a trader sells for future delivery, there is really no way of telling whether he possesses actual grain or not,

but a large proportion of future sales are purely speculative short sales, *i.e.* the seller does not own actual grain at time of sale.

If a person sells 10,000 bushels of wheat at 90 cents per bushel for delivery in May, he expects to be able to buy 10,000 bushels with which to fulfill his contract; and he naturally hopes to be able to buy it for less than 90 cents, for otherwise he would make no profit. The short seller therefore wants the price to go down; he is a "bear" in the market. If the price does go down, he buys in, or "covers," and thereby takes his profit. He also may be content with a small profit, or he may wait, hoping that the price will go down still further.

The short seller may fulfill his contract either by purchasing actual grain in the cash market to deliver on his contract, or by buying grain for future delivery, knowing that the seller will deliver to him the grain which he in turn can deliver to the one to whom he has sold. Every seller of wheat for future delivery must contemplate the actual delivery of grain during the future month; every purchaser for future delivery must contemplate the actual taking of wheat during the delivery month. If a person buys 10,000 bushels of wheat for May delivery, and that is the only transaction that he makes, he is absolutely sure of having 10,000 bushels of wheat delivered to him at some time during May. Delivery is made in the form of a warehouse receipt, which represents the 10,000 bushels stored in some elevator. The recipient of this receipt thus becomes the owner of the 10,000 bushels, and notifies the elevator as to what disposition shall be made of it.

But the aggregate amount of wheat represented by purchases and sales for future delivery vastly exceeds the amount of wheat actually delivered. This is because the wheat is bought and sold and rebought and resold for future delivery a great many times before the month of delivery arrives. When a trader buys 10,000 bushels as a speculation, he may resell it within an hour at a profit of one quarter of a cent. A single trader may thus buy and sell hundreds of thousands of bushels in a single day. It is this constant buying and selling that makes the "continuous" market that is such a remarkable and valuable feature of grain exchanges. The total volume of future trading is so enormous as compared with the actual amount of the commodity marketed, that the mere figure excites suspicion and misgiving in the minds of those who have not been able to grasp the workings and functions of a speculative market. Whether the total volume of future trading is ten or one hundred times the actual amount of grain, makes very little difference, except that it may be said in general that the larger the volume of future trading in any one market, the more frequent the bids and offers of traders, and the more delicate the adjustment of price to every news item or rumor affecting supply and demand.

Corners. — In spite of the great volume of trading that takes place, it happens, except in extremely rare instances, that when any given delivery month arrives, those who have sold short in the speculative market have enough actual wheat to fulfill their contracts, and those who have bought long are ready to take delivery of the actual grain. Of course it is possible that the

buyers may have bought up more wheat than the shorts can find to deliver, in which case it is said that they have cornered the market. Enough unexpected grain usually shows up at the last minute to make such a corner impossible, but if the actual grain is not at hand, the shorts are "squeezed" and have to buy from those to whom they have contracted to deliver, or, in other words, settle their contracts by paying over to those who have cornered the market the difference between the price they contracted to sell for, and the price which the manipulators have brought about through their monopoly power. The possibility of cornering a market depends on the quantity of grain available for delivery and the extent to which the "bulls" have been able to buy this up.

The possibility of corners is of course one of the weaknesses of the speculative system, but, as suggested before, successful ones are of extremely rare occurrence. There would be the same possibility of cornering the supply of *actual wheat*, if there were no system of future trading, and the results would doubtless be more serious, because under the present system a corner affects seriously only the price of the future, and that for only a short time or until the end of the delivery month. Corners cannot very well occur in July or September because such large quantities from the new crop are coming to market; nor in December because there is still so much of the crop available. Corners, if they occur at all, are therefore limited to the May futures (in the case of wheat in the United States).[1]

[1] In markets like Minneapolis and Duluth where only northern spring wheat is deliverable on contract, corners might occur in July, because the new crop does not begin to reach market until August.

The fact that the deliveries in any contract month almost invariably coincide with the actual desires on the part of buyers to take these deliveries is one of the most difficult phenomena of the futures market for the casual student to understand. How does it happen that the thousands of future contracts, involving hundreds of millions of bushels traded, apparently disappear, leaving only a comparatively few contracts to be actually carried out by the delivery of wheat? The answer is to be found in the fact that the great majority of future trades balance or cancel each other. A speculator buys wheat for the purpose of making a profit through price fluctuations. He makes no profit by merely buying for future delivery for the sake of taking the actual wheat, unless indeed he is a flour miller, and wants the wheat to grind. Sooner or later, and generally sooner, he sells the future contract, taking his profit or loss, whichever it may be. In other words his purchases and sales in the long run are equal. Similarly, the short seller sooner or later buys again. The majority of speculators even up in this way so frequently that they rarely go long or short, even overnight. In other words, the great bulk of the trades cancel each other; only those who actually desire to deliver wheat remain short until the delivery month, and only those who really wish to have wheat delivered to them remain on the long side of the market.

Settling of Balances. — But the further question remains: How are these cancellations of transactions actually effected? If every one bought and sold, or sold and bought, at exactly the same price, it would be a simple matter, but then there would be no reason for

one's spending his time buying and selling. In reality, one buys and sells (ordinarily) at different prices, always with the hope of making a profit, but oftentimes at a loss. The actual number of bushels of wheat bought and sold in future trading balance each other in the long run, but how about the settlement of the balances of profits and losses involved in the myriad of separate trades? Obviously, one way would be for the buyer to pay the seller in full every time he purchases a lot of wheat for future delivery. But then the traders would have to spend most of their time writing checks and a large part of their incomes in maintaining accounting departments. This is the way banks used to settle their balances with each other, but it was relatively easier for banks to do it than it would be for traders in a grain pit. One of the chief features of modern business has been the development of time- and labor-saving devices, and the grain exchanges suffer nothing in comparison with other mercantile institutions in the development of time-saving methods.

There are two methods by which settlements among future traders are adjusted: first, by "ringing out"; and second, by means of a clearing house. By the ringing-out process, a group of traders who have been dealing with each other, get together. A has sold 5000 bushels to B; B has sold a like amount to C; C has sold to D; and D has sold to A. It will be noticed that a ring has been formed, in that the last one in the chain has sold to the first. If the sales had all been made at the same price, these four traders would merely need to agree to cancel the transactions with each other without the passage of

any money. If A owes B $10; and B owes C $10; and C owes A $10; then the three can agree to cancel their debts without handling any money. But if A owes B $10; and B owes C $15; and C owes A $12; then the situation is as follows:

Net amount due A	$2.	
Net amount owed by B		$5.
Net amount due C	$3.	

The three debts may be settled if B pays $2 to A and $3 to C. Just so in settling balances among grain dealers by the ringing-out process. The ring may contain a large number of dealers; some will have net balances due them, while the others will have net amounts which they owe to the others. These balances may then be settled by means of a few payments involving small amounts.[1]

The Clearing Association. — A still higher development of cancellation of trades is found in the clearing houses or associations which have been organized among the traders of some exchanges. Through such associations, balances between members are settled daily, and the object and methods are similar to those of the clearing houses organized by banks. The Chamber of Commerce Clearing Association of Minneapolis is a separate corporation, the stockholders of which are members of the Minneapolis Chamber of Commerce. Not all members of the Chamber are also members of the clearing association, but those who are not members of the latter usually clear their transactions through those who are members.

[1] For a more complete description of the ringing-out method see Brace, The Value of Organized Speculation, pp. 39–42.

The *modus operandi* of this association is well described by the secretary of the Minneapolis Chamber of Commerce[1] in the following quotation:

When two members of the Chamber of Commerce make a contract for future delivery, on the floor of the Exchange Room, and both these members are also members or stockholders of the Chamber of Commerce Clearing Association, they make reports on blank forms provided for that purpose to the Clearing Association; one party — whom we shall call A reporting the sale to the second party, whom we shall call B of 5000 Bu. of May Wheat, at 85c per bushel; B makes a similar report, showing the purchase from A of 5000 Bu. of May Wheat at 85c; both these reports being forwarded to the Clearing House promptly after the close of the market.

The Clearing Association immediately makes a record of these reports showing A to be "short" 5000 Bu. of May Wheat, and B to be "long" 5000 Bu. of May Wheat. The total amount of wheat which is short in the Clearing Association must always be precisely equal to the total amount of wheat which is long in the Clearing Association.

The Clearing Association requires all open trades upon its books to be protected or margined daily; that is, if at the close of the market the day following the date of the trade above mentioned, May closed one cent higher than on the previous day A would be required to forward a check for one cent per bushel or $50, to protect his short sale to B, and the Clearing House would forward a check to B in this same amount. If the market fluctuates considerably, the Clearing House may require additional and special protection, as margins from its members. The Clearing House is maintained by a small charge made for clearing trades.

We will suppose that in the above case, B was a speculator.

[1] J. G. McHugh, The Formation, Development and Economic Functions of Grain Exchanges, pp. 4 and 5. This is a pamphlet issued by the Minneapolis Chamber of Commerce in 1914.

The market having advanced one cent per bushel, the purchase from A shows B a profit of one cent per bushel, or $50, and he may desire to sell the wheat which he has contracted to buy from A to C. If he does so, B reports the sale of 5000 bushels of May wheat to C at 86 cents, and C reports the purchase of 5000 bushels of May wheat from B at 86 cents. If this is the only open trade that B has in the Clearing Association, the Clearing House would cancel the purchase from A with the sale to C, and B would be neither long nor short in the Clearing Association. The Clearing Association would then show A still short 5000 bushels of May wheat, and C long 5000 bushels of May wheat, thus substituting C for B, as the party to take delivery of the wheat sold by A.

All contracts for the purchase and sale of wheat for future delivery, whether speculative or not, must contemplate the actual taking of the delivery; and if an individual makes a purchase of wheat for future delivery, as B did from A above mentioned, B is quite certain to receive delivery of 5000 bushels of No. 1 Northern Wheat, as evidenced by a warehouse receipt as above mentioned sometime during the month of May following, unless before delivery takes place he re-sells the contract to another purchaser, as in the case last above cited.

Thus it is seen that the majority of future trades are balanced against each other and cancelled, at the same time settling the differences payable by one member to another. Some shorts and longs will still be left in the delivery months, and the contracts between these will be satisfied by the delivery of actual wheat.

The Contract Grade. — The next question that arises is: When a person buys wheat for future delivery, what quality or grade of wheat may he expect to have delivered to him? In other words, what quality of wheat does the future price represent? This varies in different markets, according to the kinds of wheat handled. In Minne-

apolis, for example, which is a spring-wheat market, No. 1 Northern is the "contract grade," *i.e.* No. 1 Northern is the grade which must be delivered on contract. No. 1 Hard, which is a higher grade than No. 1 Northern, may also be delivered if the seller so desires, and there is also a further provision that No. 2 Northern (the next grade below No. 1 Northern) may also be delivered if the seller is willing to take three and one half cents less than the price of No. 1 Northern. Ordinarily, the difference between the cash prices of No. 1 Northern and No. 2 Northern is less than three and one half cents, and consequently very little No. 2 is delivered on future contracts. But if the quantity of No. 1 in any one year were short, and if there were an attempt to corner it, then No. 2 could be used in fulfilling contracts. In fact, this is the reason for making No. 2 deliverable at a discount of three and one half cents; this provision, making available such a vast quantity of wheat for delivery, practically precludes the possibility of a corner in the Minneapolis market.

The grain exchanges themselves prescribe in their rules and by-laws which grades may be delivered on contract. Chicago is a winter-wheat market and either No. 2 Hard Winter or No. 2 Red Winter may be delivered on contract. No. 1 Northern Spring may also be delivered, but only a small quantity reaches this market.

Requisites of the Contract Grade. — It is best to have only one grade that may be delivered, as is practically the case in Minneapolis. In Chicago, No. 2 Hard and No. 2 Red are of so nearly equal value that they answer the same purpose as a single grade. Whenever it is

necessary through lack of sufficient quantity of any one grade of high quality to allow delivery of any one of a number of grades, the question of premiums for the better grades and of discounts for the poorer grades becomes a vital problem, as in the cotton market, discussed below.

The ideal characteristics of a contract grade are first, that it be as narrow as possible, *i.e.* contain grain of as nearly equal quality as possible, and second, that it contain enough grain to make a corner in the contract grade normally impossible. These two requisites are difficult to satisfy; probably the situation in the spring-wheat markets of Duluth and Minneapolis is as favorable as can be found. The wheat of the Northwest is of such uniform quality that a large proportion of the crop in normal years falls within the grade of No. 1 Northern. This grade itself is not so narrow, however, as some might desire. Ordinarily there is a variation or spread in the cash price of No. 1 Northern of from one and one half to two cents; *i.e.* choice No. 1 Northern sells for one and one half to two cents higher than the poorer wheat which just barely makes the grade. There can be no such spread in the future price, and when a dealer or terminal elevator delivers wheat in fulfillment of a future contract, he naturally delivers only the poorest wheat that makes the grade. In fact wheat of various grades is mixed in the terminal elevators in such a way as to attain only a high enough quality to barely make the contract grade.[1] Since a buyer knows that he will have delivered to him only the poorest wheat that will qualify, the price of the

[1] See description of mixing in Chapter XVII, p. 378.

future may be said to represent this poorer quality of wheat at the lower edge of the contract grade. If the grades were widened out sufficiently to include wheat of inferior milling quality, the flour mill would hesitate to take delivery of grain on future contracts. As it is now, in Minnesota at least, the flour mills prefer to buy current arrivals of cash grain which they may inspect, rather than take too much of the mixed grain at the bottom edge of the grade as it comes from the terminal elevators in fulfillment of future contracts. The arbitrary inclusion of a particular variety of wheat (" Velvet Chaff ") by the Minnesota State Inspection Department has tended to widen out the No. 1 Northern grade, because the flour mills have a prejudice against this variety.

Determination of Differences in Cotton Futures Market. — In the cotton trade the situation is entirely different. Cotton is distributed among such a large number of grades, and the proportions of the total crop falling into the different grades vary so from year to year, that it would be impossible to permit deliveries of any single grade in fulfillment of future contracts, because it would be comparatively easy to corner the small amount of cotton that would fall within it. Consequently one grade (" Middling Uplands ") is selected as a basis to which the prices of cotton futures refer; but in delivering on contract, the seller may deliver not only middling, but any one of a number of other grades, some of which are worth more, and some less than middling. If a dealer delivers a better grade than middling, he must receive a premium therefor; if a poorer grade, a discount. The difficulty comes in equitably adjusting these

premiums and discounts, or "differences" as they are called. Since the seller has the option of tendering any one of a number of grades, the buyer must surely be guaranteed that he will at least receive cotton which is worth all he has to pay for it.

For some years prior to the taking effect of the United States Cotton Futures Act in 1915, the two great cotton exchanges of the country used different methods of determining these differences: the New Orleans Exchange used the method of "commercial differences" and the New York Exchange, that of "fixed differences." Under the method of commercial differences, the premiums and discounts allowed for better and poorer grades delivered on contract are fixed by the actual selling prices of the different grades that exist in the spot market at time of delivery.[1]

This system of commercial differences was substantially the method employed by the New York Exchange in early days, but it was abandoned in 1888 for two reasons: first, the amount of actual cotton arriving at New York had begun to decrease, owing to direct shipment to northern mills from the South, and to the development of cotton manufactures in the South itself, so that there was not enough spot cotton bought and sold in New York to afford sufficient basis for close determination of differences (a real difficulty, by the way); and second, with the small amounts of actual cotton, it became in-

[1] For an admirable explanation of this matter see Conant, The United States Cotton Futures Act, *American Economic Review*, March, 1915. See also summary of Report of the U. S. Commissioner of Corporations on Cotton Exchanges, 1908.

creasingly easy to manipulate the prices of the various grades, and hence the differences between grades. For these reasons the method of commercial differences was supplanted by that of fixed differences, whereby the premiums and discounts are fixed arbitrarily by a committee at stated intervals. At first the differences were adjusted once a month (for the nine most active cotton months), but in 1897 the meetings of the revision committee were limited to two a year. Except for a change to quarterly revisions, this method persisted until 1915, when it was prohibited by the United States Cotton Futures Act.

The method of fixed differences caused much dissatisfaction. The United States Bureau of Corporations made a careful study of the problem, and issued a comprehensive and conclusive report, in which it concluded that " The present New York system of fixed differences is uneconomic, in defiance of natural law, unfair, and, like all other attempts to defy natural law, results in such complex and devious effects that the benefit of its transactions accrues only to a skilled few." [1] It was found that the differences as established by the committee became out of line with the differences in the spot market, and that therefore some grades would be overvalued and some undervalued by the arbitrary values established by the committee. Whenever cotton was delivered on contract, the seller, having an option with regard to the grades to be delivered, naturally delivered such grades as were most overvalued by the arbitrary differences.

[1] Letter of Submittal, Summary of Report of the Commissioner of Corporations on Cotton Exchanges, Part I, p. ix.

In other words, he delivered cotton which the revision committee said was worth ten and one half cents in settlement of a contract, whereas the cotton was really worth only ten cents in the spot market. Buyers naturally tried to protect themselves by paying less for the future contract in the first place, with the general results that future prices were artificially depressed, that this depression caused confusion in all markets, and that it largely destroyed the value of the future market for hedging, which is the principal value of a speculative market.

The United States Cotton Futures Act abolished the method of fixed differences by placing a prohibitive tax on all future trades which did not comply with certain specifications, including the use of commercial differences instead of fixed differences. Realizing that the spot transactions in any one market might not be of sufficient volume to make possible an accurate determination of commercial differences, the law provides that in this event these differences " shall be determined by the actual commercial differences " on the sixth day prior to the date of delivery " in the spot markets of not less than five places designated for the purpose from time to time by the Secretary of Agriculture."

Warehouse Receipts. — It has already been mentioned that deliveries in fulfillment of future contracts may be made by delivering a warehouse receipt which represents commodities stored in a warehouse. Several questions naturally arise concerning this method: Does the receipt represent a specific lot of the commodity in question, or any lot of a given grade? How is the buyer to know that the receipt itself is a valid one?

And how does the buyer know that the receipt will represent commodities which are at hand, *i.e.* not in a distant market or not in some inaccessible warehouse?

As for the first question, a warehouse receipt represents any lot of a contract grade, rather than one specific lot. When these useful instruments first developed, a warehouse receipt represented a specific lot of commodities, the identity of which was maintained in the warehouse. Two things brought about the change in this respect: first, the need of storing vast quantities of commodities, thus rendering the maintenance of identity of individual lots increasingly cumbersome and expensive; and second, the development of standard grades. It has already been shown that produce exchanges, aided by the government in some cases, have played an important part in establishing generally acceptable grades, which are so well maintained that buyers are willing to take any part of the commodity which is officially declared to be of the grade specified or understood in the contract. Thus it has come about that warehouse receipts, used in delivery of future contracts, represent any lot that falls within the grade, rather than any specific lot. This fact renders these receipts negotiable, as well as extremely serviceable to use as collateral for obtaining loans. The adaptability of a commodity to fine subdivision into established grades is necessary before it can be traded in for future delivery. Such general warehouse receipts came into use in the United States for cotton, grain, and coffee prior to 1860. Their use suggests the great importance of skillful and impartial inspection and grading of the commodities traded in for future delivery.

As for the validity of such receipts, and the guarantee that they represent commodities which are accessible to the buyer, these matters are also carefully regulated by the exchanges. In Minneapolis, for example, grain to be delivered on a future contract must come from any one of a number of elevators, located within the switching limits of the city, and designated as "regular" under the rules of the Chamber of Commerce. Such an elevator must also be a licensed public warehouse, under state laws, and fulfill other requirements as to construction, equipment, etc. Furthermore, the in-comings and out-goings of grain from these warehouses are reported from day to day to the Chamber of Commerce, their operations are otherwise supervised, and the form of warehouse receipt that may be issued is definitely prescribed. In fact, so complete are the precautions, and so carefully are they carried out, that exact compliance with the conditions has become such a matter of habit, that the questions discussed here seldom arise in the actual transaction of business — an example of the efficiency and high plane of commercial honesty attained by American business men through their own organizations.

CHAPTER XVI

FUTURE TRADING — ITS ECONOMIC VALUE

In the preceding chapter future trading has been described; the reasons for having such a system, its economic value, and its weaknesses, remain to be considered. The term " speculation " is frequently applied to future trading in general. It may be pointed out, however, that there are two general classes of future trades: first, purely speculative transactions, whereby dealers sell short or buy long simply for the purpose of making profits from price fluctuations; and second, protective or " hedging " sales or purchases, whereby dealers use the future market for the express purpose of avoiding the results and inconveniences of price fluctuations. Since the possibility of using the future market for the latter purpose is dependent on the purely speculative market, as will be developed below, it is proper to speak of the functions of speculation; the term " future trading" has been used in the preceding discussion because it appears to be more comprehensive when the distinction referred to above is kept in mind.

The functions of speculation may be summarized under the three following heads: First, it largely makes possible the shifting of risk from the actual merchandisers of commodities to a body of professional risk-

takers; second, it aids in steadying the price level and in regulating the rate at which the year's crop is consumed; and third, it aids in adjusting prices between different markets and hence in regulating the flow of commodities from producing to consuming regions.

The Shifting of Risks. — Speculation does not remove risk. Risk of gain or loss through price fluctuations or through other unforeseen occurrences is always present in every business; true, the development of modern business methods, of safe and rapid transportation, and of means for transmission of information, have all tended to reduce the risks incurred in modern business, but they never have and never can be entirely eliminated. Ordinarily a merchant or manufacturer or farmer has to assume himself the majority of the risks involved in his business; he considers the assumption of these risks as a function for which he must be recompensed, and he will not stay in the business indefinitely where in the long run he does not receive sufficient compensation to reward him for his assumption of risks as well as his outlay of labor and capital.

There are certain risks, however, the assumption of which has been taken over by special classes of business men. The best example is the risk of loss by fire taken over by fire insurance companies. Similarly, insurance companies bear risks of loss at sea, losses caused by tornadoes, as well as from loss of life and even personal injury and sickness. Although speculators do not consciously assume the burden of risks caused by price fluctuations in the market, and although they do not charge regular rates for assuming these risks, yet their

activities have practically the same effect; risks that would have to be borne by the actual handlers of commodities, if there were no speculative market, are now largely shifted to the shoulders of the speculators by the process of "hedging." The net result is that the cost of handling and of marketing is reduced, thereby benefiting both producer and consumer. Since this is by far the most important function of speculation, the method by which it is carried out through the hedging operation deserves analysis.

Hedging. — A hedge may be described in general terms as a purchase or sale for future delivery intended to offset and thereby to protect a transaction in actual merchandise. As already pointed out, if a dealer sells short or buys long in the future market without any corresponding transactions in the cash market, he is a speculator pure and simple; if, however, the dealer has bought 20,000 bushels of cash grain, then if he sells 20,000 bushels for future delivery, he has hedged his actual grain. Or if a flour miller has contracted to deliver flour in May, and buys wheat to be delivered to him in May, out of which to make the flour, he has hedged his flour sales. In the first case, the dealer has hedged by *selling* for future delivery; in the second, the miller has hedged by *buying* for future delivery; in both cases there are actual transactions in merchandise which offset the future transactions. The manner in which these hedging transactions protect the merchandisers of actual commodities from price fluctuations will be brought out by examining more closely the manner in which they are used.

Value of Hedging to Terminal Grain Elevator. — The value of hedging is admirably illustrated by the operations of a terminal grain elevator. A large proportion of the wheat crop is marketed during three or four months in the fall. Elevator companies make a business of buying up the surplus in the fall and storing it until it is needed during the rest of the year. Many of the terminal elevators in the large primary markets have capacities running well over 1,000,000 bushels each. Suppose that an elevator company buys 1,000,000 bushels of wheat in October at one dollar per bushel, to hold until the following spring. That means $1,000,000 tied up in wheat. If there were no speculative market, the elevator company could do nothing but hold this wheat, trusting that the price will be high enough in the spring to yield not only a profit, but enough to pay for interest, insurance, and cost of operating the elevator. This would be the worst kind of a speculation imaginable. If the price should fall even two or three cents, there would not only be a loss, but the elevator company might be thrown into bankruptcy. It must be perfectly apparent that if the elevator company itself is to assume this risk of price fluctuation, it cannot afford to pay so much for the wheat in the first place as it can if there is some way of shifting the risk to some one else.

But under the system of future trading, the elevator company does not have to worry about price changes, because when it buys cash wheat to put into the elevator, it immediately sells it for future delivery, or, in other words, hedges it. If the elevator pays one dollar a bushel for the wheat in October, if it knows that it costs one

half cent a month to carry it until May, or a total of three and one half cents, then if it can sell in October for May delivery at $1.05, there is a sure profit of one and one half cents a bushel. In other words, it buys for one dollar and sells for $1.05 on the same day, knowing that it will cost only three and one half cents to hold until time for delivery on the $1.05 contract. It makes no difference to the elevator company whether the price goes up twenty cents, or down twenty cents; the transaction is complete, and the profit is definite and sure. If the price should go up twenty cents, and the elevator had not hedged, it would make a large profit; but this would have been a profit derived from speculating in actual grain. By hedging, the terminal elevator waives the possibility of speculative profits and protects itself against the possibility of speculative losses. It contents itself with a return sufficient to recompense it for engaging in a warehousing business. If in October the cash price had been one dollar and the May price only $1.02, the elevator company would not have bought wheat to sell for May delivery; to have done so would have meant a loss. The terminal elevator does not care whether it pays fifty cents or $1.50 for wheat; but it is vitally concerned with the spread between cash price and future price. In some years of short crop, the demand for current arrivals is so insistent on the part of the millers that they bid up the price of cash wheat so that there is not a sufficient spread to induce the terminals to buy for storage. They cannot make their "carrying charge," as it is called. Naturally in such years there is very little money made in the terminal elevator business.

In this case, the hedging operation is simple and easy to understand. Actual wheat is bought, and then sold for May delivery, and the contract is finally completed by delivering the wheat when May arrives. But it is not necessary to wait for the delivery month if the elevator does not wish to do so. It may sell its wheat in January, for example, as cash wheat, and "buy in its hedge."

Suppose that it buys cash wheat in October at one dollar per bushel and sells May against it at $1.05, as above. Let us assume that in January, the cash price has fallen to ninety-five cents. The May price at that time will also have fallen, and by that time the spread between cash and May will be narrower, because the cash and future prices tend to come together as the delivery month approaches. Let us assume that the May price in January has fallen to ninety-eight cents. The whole transaction then stands as follows:

Purchases		Sales	
Cash (in Oct.) @	$1.00	May (in Oct.) @	$1.05
May (in Jan.) @	.98	Cash (in Jan.) @	.95
Total	$1.98		$2.00

This transaction shows a gross profit of two cents per bushel, out of which the elevator company must pay its carrying charge (cost of operation, interest, and insurance) and derive its net profit. If the wheat had not been hedged, the elevator would have lost five cents per bushel on the wheat itself, as well as the cost of carrying from October to January.

Value of Hedging to the Flour Miller. — The flour mill also hedges to protect itself against price fluctuations. It is usual for flour mills, as well as other kinds of manufacturers, to make sales in advance. Suppose that in October, a flour mill wishes to figure on an order of 10,000 barrels of flour to be delivered the following June. How can it determine the price to charge for flour so far ahead? It will not be ready to buy the wheat for making this flour until May, and there is no telling what the price of cash wheat may be at that time. If it has to rely on the cash market, the price may have risen a few cents, due to a disappointment in the Argentine crop, so that it will lose money in fulfilling the flour contract. One way to do would be to figure on the basis of the cash price in October, close the flour contract, and buy 50,000 bushels of cash wheat in October, and store it until May. But the flour mill is in the milling business, not the storage business (except to a slight extent in some instances); it prefers to leave the highly specialized business of wheat storage to the efficient elevator companies. So the flour mill, in figuring on the price it must charge for flour to be delivered in June, merely looks at the price of wheat for delivery in May, *i.e.* the May future. It closes the flour sale on this basis, allowing enough margin for a fair milling profit, and immediately buys a sufficient amount of wheat for delivery in May. It makes no difference to the miller whether the price of wheat rises or falls; he has his wheat all bought, and knows that it will be delivered to him in May; he has hedged his flour sale, and thereby assured himself of a fair milling profit, and obviated the speculative profit or loss which would

result from a fall or rise in the price of cash wheat. If he could not do this, *he would have to charge more for his flour* to allow a safe margin to cover any possible increase in the price of wheat.

How the Country Elevator Hedges. — It is also worth while to study this hedging operation from the standpoint of the country elevator. The line houses always hedge their holdings; privately owned houses also usually do so. The majority of farmers' elevators in Minnesota usually hedge their holdings, whereas those in Kansas do not, because in Kansas there is a current belief that any use of the future market means gambling! In the early days of the farmers' elevator movement it was believed that one advantage to be derived would be the holding of the actual grain in the country elevators until prices should rise in the winter or spring. Statistics prove that on the average such hopes are in vain; many farmers cannot realize that the holding of unhedged grain is just as much speculation as any kind of transaction which may be affected by a fluctuation in prices. And to use the futures market *to avoid speculation* is beyond the understanding of the average person who has not given the matter serious thought.

In paying the farmers for their wheat, the country elevator aims to buy it at a low enough price to yield a gross profit large enough to pay the expenses of running the elevator and to leave a net profit. The margin allowed for this runs ordinarily from two to three cents (or a little higher), and most of this margin is necessary to cover expenses of operation. Even if the grain is shipped out promptly, it will be several days, perhaps

two or three weeks, before it reaches a primary market, during which time the price may have fallen so as to result in loss to the elevator company. Evidently it would be impossible for the country elevator to handle grain on such a small margin unless there were some way to protect itself against price fluctuations. It does this by hedging, *i.e.* selling for future delivery an amount equivalent to the quantity of cash grain bought and unsold. Even if hedged, the country elevator cannot hold its grain, because it has to make room for that brought in by farmers from day to day; consequently, it sends its grain to market, sells it as cash grain, and then buys in its hedge.

A specific example will make this clear. Suppose that the elevator buys wheat for ninety, and sells a future against it for ninety-five; assume that the price of wheat goes up two cents by the time that this wheat reaches market, and that the future also has gone up two cents (which would be approximately the case over a short period). The whole transaction would be as follows:

Purchases		Sales	
Cash @	$ .90	Future @	$ .95
Future @	.97	Cash @	.92
Totals	$1.87		$1.87

In this case the elevator would have made money by not hedging because the price rose, but it waived the opportunity of making a speculative profit by protecting itself against a speculative loss. The elevator made its

profit on its original purchase, *i.e.* in reality it would have paid less than ninety, — say perhaps eighty-seven, leaving a gross profit of three cents. If the price had fallen, the future would also have fallen, and the purchases would have just balanced the sales. In other words, the loss on the cash grain would have been offset by a gain of an equal amount on buying in the hedge.

The spread between the cash and the future is all-important in hedging transactions. It has been assumed in this case that the future price fluctuates with the cash price, and over short periods this is approximately true. Since in the long run, the cash price and the future price tend to come together as the delivery month approaches, the tendency even over short periods is for the spread to narrow. If it had narrowed in the above illustration, the elevator would have made a profit out of the hedging transaction; if it had widened, there would have been a loss. (This may be shown by inserting suitable figures in the above illustration.) In other words, the relation between cash and future price is not so perfect as to remove all risk from the one who hedges, but the chance of loss or gain through variations in the spread is so slight that it is insignificant as compared with the risk from fluctuations in price of the commodity itself.

In connection with the operations of a country elevator, the opponents of future trading sometimes argue that hedging is not necessary, because the elevator can sell "on track" or "to arrive"[1] at a fixed price, thus not assuming the risk of price fluctuation between the time of shipment and time of sale at primary market.

[1] See pp. 50, 51.

Those who argue this way overlook the fact that the purchaser of the grain in this case assumes the risk of price fluctuation and that he in turn shifts the risk by hedging. In other words, if it were not possible to hedge, track sales and to-arrive sales would be practically impossible, except at a sufficiently low price to allow for price fluctuations between time of purchase in the country and time of arrival at market.

There can be no doubt of the beneficial effect of hedging in reducing the cost of marketing those commodities which may be traded in for future delivery. It has been shown how the flour miller can afford to charge less for his flour; how the terminal elevator can pay more for wheat to store; and how the country elevator can allow a smaller margin and hence pay a higher price to the farmer — than if it were impossible to hedge. It is significant that there is no speculative market for barley and rye, and that they are handled at wider margins all along the line. Country elevators, for example, take out a much wider margin on barley than they do on wheat, and yet they are more apt to lose money on the former than on the latter. On a gradually sagging market they are almost sure to lose money on barley, because they cannot protect themselves against a fall in price. It is little realized how regularly and systematically the handlers of wheat hedge their holdings; it has come about that practically all the wheat that finds its way to the large primary markets is kept hedged at every step from the time it leaves the farmer to the time it emerges from the flour mill in the shape of flour. The only exceptions of importance are a few country eleva-

tors and a very few of the smaller flour mills. The handlers of large quantities of wheat in the primary markets keep their holdings hedged almost without exception.

Dependence of Hedging on Pure Speculation. — There are opponents of speculation who realize that hedging is of economic benefit, and who would so restrict future trading as to allow hedging to continue and at the same time prohibit pure speculation. Such opponents little realize the dependence of hedging operations on the general speculative market. It will be remembered that by pure speculation in futures is meant the buying or selling, not for the purpose of protecting actual transactions in commodities, but merely for the purpose of striving for profits out of price fluctuations. A trade for future delivery involves both a buyer and a seller. It may be that in any single transaction both buyer and seller are hedging; or that both buyer and seller are speculating; or that either buyer or seller is hedging while the other is speculating. Let us assume that we prohibit pure speculation, and then both buyer and seller in every transaction would have to be hedging.

To say nothing of the practical difficulty of determining in each case whether both parties are hedging — and this difficulty would be especially great when orders from outside markets are considered — it is safe to say that the market for futures would be so crippled and narrowed as to destroy it for hedging purposes, and that the principal risk-assuming specialists would be eliminated. Suppose that a flour mill sells flour involving the purchase of 100,000 bushels of wheat as a hedge; the

representative of the mill steps into the trading pit to make his purchase; if future trading is limited to hedging transactions, some one must be found who will *sell* 100,000 bushels *as a hedge*, or at least a number of sellers must be found whose aggregate hedging sales will just satisfy the desire of the miller to buy 100,000 bushels as a hedge. Such a condition might exist occasionally, but it is extremely improbable that the desires of hedging buyers and sellers would exactly offset each other at any moment during trading hours. This improbability is reduced to a certainty by the fact that at some times of year hedging sales exceed in amount hedging purchases, and *vice versa*. During the autumn, for example, the terminal elevators have occasion to make hedging sales of great volume against their stored grain, whereas the flour mills distribute their hedging purchases with fair uniformity throughout the year.

Thus it is seen that the market for hedging transactions is dependent on the speculative market; the speculators "take up the slack," as it were; they are ever present and ever ready to buy and sell, thus furnishing the continuous market that is so necessary in a business which is conducted on extremely small margins, and where delay of even a few hours, with ever so slight a fluctuation in price, may mean profit or loss. It is the speculator, who by standing ready to buy or sell at any moment, furnishes the market for hedges, and thereby assumes the risk that the actual dealer in wheat or flour rids himself of through his hedging transactions. It is safe to say that to prohibit pure speculation would ruin the market for hedging purposes; whether the evils of

speculation are so great as to make it advisable to destroy the system in order to eliminate these evils will be considered in another place.

Puts and Calls. — Another device of future trading sometimes used by handlers of grain to insure themselves against loss from price fluctuations is through "privileges." The commonest forms are called "puts" and "calls," which may be explained best by the use of illustrations. At the close of a trading day, a dealer finds that he has bought for future delivery 10,000 bushels of wheat at ninety cents per bushel, and he is afraid that the price will be lower when the market opens the next morning. If the market opens at eighty-eight, he stands to lose two cents a bushel, or two hundred dollars on his 10,000 bushels. He finds some one who believes that the market will not fall even to eighty-nine, and who is so sure of his opinion that he agrees to buy the 10,000 bushels at eighty-nine the next day, provided the first trader will pay him for the privilege of forcing him to take it at that price. The first trader pays say two dollars per thousand bushels, or twenty dollars in all, for this privilege of "putting" the 10,000 bushels to the second trader at eighty-nine cents if he cares to. If the market falls two cents, as the first trader anticipates, he will of course exercise his privilege, and he loses only one cent per bushel (plus the cost of the privilege) whereas he would otherwise have lost two cents. The second trader pays eighty-nine, whereas the wheat is worth only eighty-eight; his loss of one cent per bushel is diminished by the twenty dollars that he was paid for the privilege. If the price had not fallen to eighty-nine,

the first trader would not exercise his privilege, though he would be out the twenty dollars that he paid as protection against greater loss.

The put as described above is used by the trader who is " long " either in the speculative market or in actual wheat. It may be that a line-elevator company finds from late reports from its houses that it owns 10,000 bushels more than it has hedged, and wishes to protect this against serious loss until the next morning, and consequently purchases a put. A " call," on the other hand, is used by the short seller and is a privilege to buy at a certain price rather than to sell. A trader has sold short 10,000 bushels at ninety and he is afraid that the market will open higher the next morning, which would mean a loss when he covers. He consequently purchases a privilege to buy wheat at ninety-one if he cares to. If the market opens at over ninety-one, he will exercise his privilege and call the wheat; otherwise he will refrain, but he will be out the purchase price of the call which he bought for protection against greater loss. Puts and calls are true " options " because the buyer has the option of carrying them out or not as he sees fit.

Although puts and calls as described above may be used in a perfectly legitimate manner, they are more commonly resorted to as pure gambling devices. A trader often buys a put or call without having anything to protect, and the transaction is purely a bet on what the price will be the next morning. The incurring of such risks exercises no economic benefit to grain marketing, and it would probably be better to abolish the use of puts and calls altogether, because such a small pro-

portion of them are used for actual protection, and because they result in the prevalence of petty gambling, which is not only demoralizing to those who resort to it, but also offers a legitimate ground for complaint on the part of those who would abolish speculation altogether. The Minneapolis Chamber of Commerce, for example, prohibits traffic in puts and calls on the trading floor, but passively permits it in the smoking room adjacent to the trading floor outside of trading hours. This is not only a shortsighted policy for the Chamber to pursue, but represents a flagrant disregard of public opinion and of the opinion of some of the more enlightened among its own members.

Effect on Prices. — The second function of speculation as enumerated at the beginning of this chapter is that it aids in steadying the price level and in regulating the rate at which the year's crop is consumed. Modern methods of collecting information about crop and industrial conditions, and of disseminating such information by wire and cable primarily make possible the uniformity in prices and even disposition of a year's crop, but the speculative market furnishes the machinery for making use of market information in such a way as to bring about the desired results. Future prices are the combined estimates of expert market specialists as to the prices of commodities at future times. In making such estimates, speculators take into consideration the size of the crop, the visible supply in warehouses, the probable rate of consumption, and the general price level that it will be necessary to maintain in order to prevent an over- or under-consumption during the fall

(in the case of wheat), with consequent scarcity or surplus during the following spring and summer.

Normally, the price of wheat in the United States should increase between the fall of one year and the following spring and summer, owing to the cost of carrying in elevators. Although the adjustment is never absolutely perfect, the results achieved through speculation are truly remarkable. The following figures show the average monthly prices for the ten-year period 1901–10 of cash wheat at Chicago:[1]

	Cents per Bushel
July	93.1
August	92.1
September	92.7
October	92.3
November	91.1
December	93.3
January	91.2
February	93.5
March	92.8
April	92.3
May	95.6
June	95.7

From these figures it will be observed that the lowest average monthly price was 91.1 cents, and the highest, 95.7 cents, a total difference of only 4.6 cents. The prices do not increase evenly from month to month but it is indeed significant that the average prices of August, September, and October (months of heavy receipts in Chicago) were adjusted in such a way as to make it necessary for the price to be only 95.6 cents and 96.7 cents respectively in May and June. The difference

[1] Brace, The Value of Organized Speculation, p. 272.

between the average September price and the average May price is only 2.9 cents — hardly enough to pay for carrying wheat in an elevator for nine months. One interesting conclusion to be drawn from these figures is that a farmer would have obtained on the average 2.9 cents more per bushel if he had held his wheat each year until May instead of marketing it in September. This would not have been enough to pay for storage on the farm and to make up for shrinkage due to evaporation of moisture and imperfect storage facilities. In other words, the farmer year in and year out obtains as much and more for his wheat by marketing in the fall as by holding until the following spring.

Speculation not only tends to level prices throughout the year, but it performs a most signal service in making price changes over short periods less abrupt. In Chapter XII it is shown that when the marketing machinery for any commodity is well organized, so that traders come together and register their opinions continuously in the form of bids and offers, the fluctuations in price are more frequent but less severe than where the market is not so well organized. The reasons for the relatively gradual fluctuations in the wheat and cotton markets, for example, are to be found in the tremendous pressure brought to bear on both sides of the market by speculators. The shorts, or bears, are always trying to depress the market; the longs, or bulls, are always trying to raise it. The unfortunate thing for either of these classes in realizing their desires is that sooner or later the short sellers have to become buyers, and the bulls, sellers. Speculative short sellers, for example, sell large quanti-

ties for future delivery, hoping to see the price go down; but the only way they can make any profits from a fall in price is to begin to cover, *i.e.* to buy again, and their purchases tend to obstruct a further decline, and possibly to cause the price to begin to rise again. Professional speculators are content with extremely small profits per transaction. Just as soon as the price begins to fall, there are shorts who begin to buy; and on the other hand, just as soon as the price begins to rise, there are bulls who begin to sell in order to take their profits. In other words, just as soon as the price begins to move in either direction, even by eighths of a cent (in the case of wheat), there are strong counteracting forces which hinder and often completely obstruct the price movement. As a consequence, extreme fluctuations in the prices of those commodities which are dealt in speculatively are exceedingly rare under normal conditions, and this leveling influence is of great value to those engaged in merchandising the commodities. In this connection, the fallacy that short selling has the effect of generally depressing prices should be mentioned, but this has been treated so conclusively in other places that a detailed discussion is not necessary. Suffice it to say that the pressure from the bull side is just as great as from the bear side (in fact there are likely to be more bulls than bears if anything), and that the bears tend to defeat their own purpose by having to become buyers, as explained above. Objections to speculation based on this time-worn argument appear to be decreasing.[1]

[1] For a good discussion of the effect of short selling on prices, see Stone in Report of the U. S. Industrial Commission, Vol. VI. For gen-

"**Spreading.**" — The third function of speculation as enumerated at the beginning of this chapter is that it aids in adjusting prices between different markets and hence in regulating the flow of commodities from producing to consuming regions. Here again modern methods of collecting and disseminating information furnish the basis; organized speculation furnishes the machinery which brings about a most delicate adjustment of prices between markets. One way of keeping markets in line with each other is to buy actual commodities in one market where prices are low and ship them to another where prices are high. This is commonly done in all lines of marketing. When there is a future market, it may be possible to sell for future delivery in one market and fulfill the contract with actual commodities purchased in another market. Or, there may be purely speculative transactions between markets, whereby a dealer buys for future delivery in one market and sells simultaneously an equal amount for future delivery in another market. In the grain trade this practice is called "spreading"; a more scientific term for this whole class of transactions is "arbitrage."

Spreading is a form of speculation whereby dealers aim to make a profit from variations in spreads between different markets. Suppose that a dealer buys May wheat in Minneapolis at 90 cents, and sells in Chicago at 98 cents, the dealer believing that the spread of 8 cents is too wide, and is bound to narrow. Two days later the

eral discussions of the effect of speculation on prices see Emery, Speculation on the Stock and Produce Exchanges of the United States, Chapter IV, and Brace, The Value of Organized Speculation, Chapter II.

Minneapolis price has fallen to 88 and the Chicago price to 95, the spread having decreased to 7 cents. The operator then sells his Minneapolis contract, and buys in Chicago. The whole transaction appears as follows:

Purchases		Sales	
Minneapolis	$ .90	Chicago	$ .98
Chicago	.95	Minneapolis	.88
Total	$1.85	Total	$1.86

This transaction shows a profit of one cent a bushel (minus brokerage charges for executing the orders); the loss of two cents on the Minneapolis price is more than made up for by the profit of three cents on buying in the Chicago future. The operator in such a transaction is not concerned with whether actual prices go up or down; all he is interested in is the difference between the prices in the two markets. His original purchase in Minneapolis tends to boost the price there; his original sale in Chicago tends to reduce the price in that market. Just as soon as variations from normal spreads (based primarily on costs of getting the actual commodity from one market to the other) begin to appear, traders immediately begin to enter with their spreading operations and tend to keep the various markets in line.

It is this continuous adjustment and readjustment of prices between markets that governs the uniform flow from producing to consuming regions, and from market to market as trade conditions require. The regulation of the flow in this manner becomes practically automatic,

and in the highly organized trades periodic gluts and scarcities in the different markets are practically unheard of. Sometimes the price in one market becomes relatively higher than the prices in others, but this is due to some special reason why the commodity should be attracted to the one market rather than to the others.[1] This is sometimes true of Minneapolis, for example, where the large flour mills often have to bid up the price of wheat to attract a sufficient quantity for milling purposes from other markets. Such a departure from normal price relations is in reality a good illustration of the principle that speculation tends to regulate the flow of commodities to the places where they are most needed, because it is largely through inter-market trading in futures that the desired adjustment is achieved.

The Evils of Speculation. — That there are serious evils connected with organized speculation cannot be denied. The very fact that trading in futures is so well organized — that there are definite market places and regular dealers who make a business of executing speculative orders at low brokerage charges and on relatively small margins — makes it easy for any one with a little money to speculate. And herein lies the great evil — the temptation on the part of outsiders, — bank and store clerks, farmers, business men, etc., — to dabble in futures. The professional speculator is a trained expert; as already pointed out, he plays an extremely safe game, taking his profits and losses in small doses. He runs no more risk of loss — nor as much — as the farmer who plants a hundred acres of

[1] Compare discussion of price of wheat in Chapter XII.

wheat, or the manufacturer who starts a new factory, or the merchant who establishes a new store. The professional speculator performs an important function, and to drive him out of business would be to destroy the continuous market for hedging operations, to derange the highly delicate machinery for recording opinions of traders, to lessen the pressure on prices from both above and below, and to restrict the interplay and competition between markets. These effects would throw greater risks on the actual merchandisers, and force them to take out larger margins to cover these risks. It is also probable that there would be a greater amount of speculation in the commodities themselves and a greater chance of manipulation on the part of the powerful financial interests.

The problem is therefore to eliminate the unfortunate features of the system and still retain the system itself. Speculation on the part of outsiders is encouraged and solicited by many commission firms. Some "private-wire houses" maintain branches in various cities for the purpose of making it easy for the inexperienced public to speculate. A most doleful picture can be drawn by the opponents of future trading — of the results of indiscriminate speculation — defalcations, suicides, murders — traceable to losses through speculation. Possibly this evil of speculation on the part of ignorant outsiders can never be entirely abolished, but it can be greatly alleviated. In fact it is not as bad to-day as it was even fifteen years ago; this improvement is especially noticeable in the smaller markets like Duluth and Minneapolis and Kansas City. Many grain dealers

have had gradual awakenings of conscience and have come to absolutely refuse speculative orders from outsiders who are not qualified to shoulder the risks involved. Others still cling to the old method of soliciting orders from any one and every one, but the whole trend of opinion among the leaders of the organized exchanges is that greater and greater safeguards should be established to prevent the "pikers" from taking "flyers."

Possibly a gradual education of the public is the only hope for permanent improvement, but there are certain positive steps that might be taken: the solicitation of speculative orders from people not in the grain trade might be abolished; brokers might be licensed and have their books subject to inspection by public authorities in case of complaint, just as commission men handling farm products are now subject to state supervision in some states. Conditions are undoubtedly ripe for such legislation in states like Minnesota, Iowa, Missouri, and Kansas, but whether it would be practicable for Illinois and New York is a different question. This phase of the problem has never been adequately investigated, and until we know more about the actual volume of outside speculation, the manner of handling and soliciting it, the classes of people who are foolish enough to resort to it, it is dangerous to advocate any specific legislation for the country as a whole. Suffice it to say that the efforts of the future should be along this line rather than in the direction of complete prohibition.

There are other weaknesses of the speculative system: the existence of bucket shops, already largely driven out, partly by law and partly by the exchanges them-

selves; the possibility of corners, — of rare occurrence and probably not so bad as monopolistic operations in commodities themselves if there were no speculation; petty gambling among members in puts and calls, which the exchanges themselves should abolish; and certain technical matters, such as those dealt with in the cotton exchanges by the United States Cotton Futures Act.

Government Regulation. — Innumerable attempts have been made both in the National Congress and in the various states to suppress speculation;[1] it is significant that the only federal law, The United States Cotton Futures Law, passed in 1914 and effective in February, 1915, is regulatory rather than prohibitive, in spite of the fact that certain agitators against speculation in the Northwest are claiming that through this law the Federal Government has prohibited future trading in cotton! This law imposes a tax of two cents per pound on all cotton sold for future delivery, unless certain conditions are complied with; the principal conditions are that the method of commercial differences rather than of fixed differences shall be used, as explained on page 330; that government standards be used in determination of grades; and that in case of dispute arising at time of delivery, either buyer or seller may refer the question to the Secretary of Agriculture for settlement. It is too early at this writing to draw any conclusions as to the practical working of the law, but if the government has protruded its finger too far into the delicate mechanism

[1] For discussions of legislation affecting speculation, see Emery, Chapter VI; the same author in *Political Science Quarterly*, 1898, and *Yale Review*, 1908; also Parker, *Annals*, September, 1911, pp. 126–154.

of the exchange, the exchange (New York) has itself at least partly to blame, because the most important single object of the law, the use of the method of commercial differences, could have been effected by the exchange itself had it followed the recommendations of the Bureau of Corporations in 1908 and had it lent a more willing ear to intelligent public opinion. The large exchanges are extremely efficient marketing organizations, but they are guilty of an unwarranted faith in their own perfection and of a haughty intolerance for outside tamperers, a situation which may result in more radical legislation than would be necessary if they paid less reluctant heed to the trend of public opinion.

CHAPTER XVII

INSPECTION AND GRADING

Importance of Standard Grades. — Frequent references have been made in the foregoing pages to the importance of standard grades in marketing. It has been pointed out that one of the factors affecting the cost of marketing a commodity is the extent to which it can be subdivided into uniform and well-recognized grades. The method of sale depends on grading; if articles are poorly graded, they have to be sold in bulk, *i.e.* the buyer has to inspect the whole mass of the commodity offered for sale before he can know what he is buying; if articles are divided into uniform grades, sale by sample, and in some cases sale by description, are possible, thus facilitating the marketing process. In the wheat trade, uniform grades make possible the mixing of different lots of the same grade in elevators, and the issuance of warehouse receipts to represent this wheat — instruments that not only serve as collateral for loans, but that also make possible an easy exchange from hand to hand. Future trading is made possible only by standard grades. The greatest value of market quotations can be achieved only in the case of those commodities that can be subdivided into narrow, uniform grades, because unless the quotations stand for

very definite qualities of goods, they cannot be used as trading bases.

Aside from these considerations careful selection of commodities as to size and color, even if not in accordance with well-established standards, is of great importance. The shortcomings of the present system of marketing eggs illustrate this point. As explained in Chapter II, farmers commonly take very little pains in gathering their eggs and in preparing them for market. They carry large and small eggs, fresh and stale eggs, white and brown eggs, clean and dirty eggs to the village storekeeper, who takes them in trade, allowing the same price for all, be they good or bad. Even the country storekeeper does very little grading and the wholesaler often buys his surplus by the "case-count" method, making his price and paying for all eggs shipped irrespective of quality. When the eggs reach the wholesaler, rigid selection through the candling process begins. Happily, country storekeepers are beginning to do their own candling, and although the grading process has not yet got back as far as the farm in many parts of the country, there are indications that this result will be attained before long. On specialized poultry farms and on general farms near cities, attention is now paid to quality.

The marketing of potatoes also illustrates the weaknesses of lax grading methods. Farmers in a single community often raise such a large number of varieties, that it is sometimes difficult to make up a straight carload of potatoes of one variety — a fact which always reduces the price several cents a bushel. When a farmer

ships his own potatoes, he frequently loads together all sorts and conditions of potatoes — very large and fine potatoes with small, gnarly, and bruised ones. The commission man at the terminal market knows at a glance that it is a "farmer's car," as it is often called, rather than from an experienced potato shipper, and the price suffers in consequence. Such shipments are usually subjected to a careful sorting process before they reach the retailer, although the marketing of poorly sorted potatoes even through the retailer to the consumer is all too common, as every housewife knows who has had to throw away so many defective tubers which are commonly left in the bottom of the basket, to say nothing of the bad spots and black hearts encountered in those that are used on the table.

Dishonesty in Grading and Packing. — Lack of uniformity of goods in a package or in a car (if goods are loaded in bulk) is sometimes due to ignorance, but unfortunately very commonly to dishonesty. The placing of small and defective peaches and berries in the bottom of the basket, and the large ones on top with best sides exposed is so common that consumers commonly expect this condition when they buy. No farmer or shipper has a right to complain about marketing methods as long as he resorts to these practices. Farmers often doctor up their loads of grain when hauling it to the local elevator; and local elevator managers frequently "set up" their cars with "screenings" in the bottom or corners of the cars, hoping that the terminal market inspectors will not discover the deception. In some markets, Minneapolis and St. Paul, for

example, hay is graded by the official inspectors by merely looking at the hay in the doorways of the cars, — consequently a large proportion of the cars are loaded with inferior hay in the ends, and the best hay in the middle. One reason why the auction method of sale has failed for apples packed in barrels is that they are so commonly packed dishonestly. Instances like these might be multiplied indefinitely, but enough has been said to indicate the deplorable conditions existing in some trades and among some shippers. The fault does not lie entirely with farmers and country shippers; wholesalers are sometimes guilty of such practices and also retailers.

Adaptability of Different Commodities to Standardization. — One outstanding feature of this problem is the fact that some goods are much more adaptable to standardization into uniform grades than others. In the first place non-perishability aids in grading, because less haste is required in marketing. In the second place, all units of some commodities are more nearly alike than all units of others. The individual kernels of wheat, for example, vary but little in size, whereas individual apples or potatoes vary greatly in this respect; even different varieties of wheat do not differ materially from each other in either size or quality, whereas the different varieties of apples are so entirely different as to make necessary a system of grades for each variety. What may be an attractive size for one variety, may be either too small or exceptionally large for another. In the third place, some commodities vary greatly in quality and size from year to year, so that even if standard

grades are established during one season, entirely different standards may have to be established the next season. And in the fourth place, different consumers value various qualities of the same commodity differently. A carload of wheat, for example, has practically the same value to all millers; a carload of barley, on the other hand, has different values to different maltsters, depending on their individual preferences for different shades of color and for different degrees of maturity; as a result, barley cannot be graded so finely as wheat. As a result of differences of this sort it may be possible to develop uniform standards for some commodities which will hold in large parts of or even the whole of the country, whereas for others, each producing section has its own peculiar grading problems, depending on varieties raised, and conditions under which they are raised.

Even in the case of those commodities where uniform grading standards are largely impossible, much can be done by individual growers, or associations of growers, by developing both honesty of pack and uniformity in quality; in other words, individual standards of quality may be established which will result in a reputation for the shipper or shippers, which in turn results in higher prices to producers and a lower cost of marketing all along the line. There are no well-recognized standard grades for Bartlett pears, at least among eastern growers, but there are instances where individual growers have standardized their packs to such an extent that city buyers will pay the top of the market to such individuals without even bothering to inspect their offerings. In

spite of a lack of uniform standards of potato grades, the Eastern Shore of Virginia Produce Exchange has so standardized its offerings of potatoes and made them known in the trade under its own brand, that wholesalers order by wire without seeing the goods. Numerous other instances of this sort might be given — illustrating one of the principal benefits that may be derived from coöperative marketing.

Achievements in Grading. — Those who say that the greatest weakness in our marketing system is the lack of proper grading — although this may be true — frequently fail to give credit for what has already been accomplished along this line. For some commodities the progress made in standardizing grades has been truly remarkable. Grains furnish perhaps the best example, in that dealers in different markets, and even in different countries, have agreed with each other on certain definite and very narrow grades. Butter dealers have agreed on a standard scheme of scoring butter on the basis of 100 points, giving certain values to flavor, body, salt, color, and style of package. Although it is often claimed that different butter dealers score the same piece of butter differently, butter experts have attained an almost uncanny proficiency in scoring the same lot of butter independently to exactly the same score, or to within a half point of each other, as evidenced by the scorings of butter judges at the frequent butter exhibitions and contests where prizes are offered for the best butter exhibited.

Considering the difficulties involved, eggs have reached a high state of grading, at least in the wholesale trades.

The different grades quoted in the newspapers and market sheets have a fairly definite meaning to wholesale dealers, who, however, are governed largely by the reputations of individual shippers and packers; similarly, dressed poultry is divided into a large number of grades which are understood by the specialist dealers in this trade. Even live stock is subdivided into a great many different grades, which, however, are understood only by those who are constantly engaged in the trade, and who are expert judges of quality. The wholesale dealers, through their produce exchanges, have been responsible very largely for the accomplishments attained in grading the great staple commodities mentioned, and they are constantly endeavoring to improve the grading systems not only within their respective markets, but through national associations to bring about a uniformity of grades in different markets. The National Poultry, Butter, and Egg Association has promulgated national grading rules for the products enumerated in the name of the association. The National Hay Association has adopted similar rules with respect to hay, and in 1915 there was a convention of hay inspectors at Kansas City, the largest hay market in the United States, where the inspectors from markets all over the country spent two days in going through cars on the tracks and comparing notes for the purpose of establishing uniformity in the interpretation of the national rules. These achievements must not be overlooked, and it must be remembered that it is primarily in connection with some highly perishable commodities, and with commodities that do not lend them-

selves to standardization that there are no well-established systems of grading. Although much more can be done, especially by individual growers, or associations of growers, it is true that many commodities never can be subdivided into such universally accepted grades as are wheat and cotton and many other staple commodities.

Systems of Inspection. — When goods are sold largely on grade, especially when different lots of the same grade are mixed together, as in the case of wheat, it is necessary to have some regularly constituted authorities to inspect the commodities and determine their grades, and it is evident that such inspection service needs to be performed with the highest possible degree of ability and impartiality. In the butter and egg trades where small quantities are sold on the floor of the exchanges with no opportunity to examine the commodities offered for sale, it is only natural that disputes are likely to arise with regard to the grade of butter or eggs delivered by the seller. Such exchanges therefore have official inspectors; inspection is not compulsory, but a member may call on the inspector to score or grade any lot of butter or eggs at any time. Wholesale butter receivers also frequently call on the exchange inspector to grade butter received from country creameries, so that they may send the official inspection certificate to the creameries as proof that the quality is below what the creameries are apt to expect. Since such inspectors are hired by associations of dealers, there is apt to be a suspicion that they either consciously or unconsciously favor the dealers. No adequate inves-

tigation has been made of this practice, but the mere fact that there is apt to be suspicion and dissatisfaction under any system controlled by the dealers themselves suggests that some change might be desirable whereby possibly the government might furnish disinterested inspectors.

Of more importance than this, however, is the question of inspection and grading of such commodities as grain and cotton, which are sold largely by grade, and dealt in for future delivery, and which also furnish the principal income to so many farmers. The inspection systems for grain, for example, were first developed by the various grain exchanges, but state inspection has been commonly adopted, especially in those states containing the principal primary grain markets. There are now eight states in which the inspection service has been taken away from the private exchanges and assumed as a governmental function. These are as follows: Illinois, Minnesota, Wisconsin (except in Milwaukee), Missouri, Kansas, Montana, Oklahoma, and Washington. In the Atlantic seaboard markets the inspection service is still performed by the exchanges themselves.

Grain Inspection in Minnesota.[1] — State inspection of grain was established in Minnesota in 1885. The Grain Inspection Department is under the supervision of a chief inspector appointed by the Railroad and

[1] The material on this topic is taken largely from a report on Minneapolis as a Grain Market prepared by the author for the Office of Markets, U. S. Department of Agriculture. See also annual reports of the Chief Grain Inspector of Minnesota, especially that for 1913.

Warehouse Commission. The department is divided into two large terminal districts, viz., Minneapolis and Duluth, but the service has also been extended to six other points in the state. Inspectors are appointed only after the most thorough examination; all new appointees are placed in subordinate positions and are promoted as vacancies occur and as their skill justifies. In addition to the Grain Inspection Department there are two Boards of Appeals, one for Minneapolis and one for Duluth, each with three members appointed by the governor of the state. The duties of these boards are to make the official Minnesota grades each year under which the Grain Inspection Department must grade the grain, and to consider grading decisions that are appealed from the State Inspection Department.

Formerly, all inspections were made at the doors of the cars as they came to the Minneapolis yards. Owing to variations in light, weather, temperature, etc., the inspectors were unable to work at maximum efficiency, and indoor or office inspection was long ago substituted for car-door inspection. Under the present system samples are taken from all cars by a trained body of "samplers." Some of these samples are taken from the cars as they enter the Minneapolis yards; others are taken at points a considerable distance from Minneapolis and are sent ahead of the freight trains in passenger trains. All samples of cars destined for Minneapolis are taken to the offices of the State Inspection Department, where the actual inspection takes place. In this way the grades on a large part of the grain are determined before the actual grain reaches the terminal market.

Samples are taken by securing small quantities of grain from different parts of the car. A tubular brass probe, which ordinarily reaches to the bottom of the car, is used for this purpose. This probe has separate chambers extending its full length. These chambers are closed when the sampler thrusts it perpendicularly through the grain to the bottom of the car; they are then opened, allowing them to fill. When the probe is removed, the grain is spread out on a cloth, and by making a number of such probings in different parts of the car, the sampler can tell whether the car is "set up" or "plugged," *i.e.* whether dirt or screenings or any other foreign substances have been placed in the bottom or in any part of the car. The number of such "set-up" cars approximated 1½ per cent of the total cars inspected for the crop year 1911–12. Besides fixing the grade, the State Inspection Department also determines the "dockage," *i.e.* the amount of dirt and foul seed in each car of wheat, rye, and flax. This is done by sifting out the dirt and weighing it, and the dockage is expressed as a certain number of pounds in a bushel.

When the shipper or any other person interested in a car of grain is dissatisfied with the grade or dockage as fixed by the State Inspection Department, he may call for a reinspection, which is also performed by the same department. If still dissatisfied, he may appeal the case to the Board of Appeals mentioned above. Both of these rights are exercised very frequently. Out of 232,512 cars inspected at Minneapolis during the year ending August 31, 1913, reinspection was called on

61,205, or 26.3 per cent of the total. The results of such reinspections and appeals appear in the following statement:

REINSPECTIONS

	Number of Cars	Per Cent of Total
Original grade sustained	38,914	63.6
Original grade raised	14,476	23.7
Original grade lowered	3,888	6.3
Original dockage changed	3,927	6.4
Total reinspected	61,205	100.0

Of the 61,205 cars reinspected at Minneapolis there were 46,665 or 76.2 per cent appealed. The results of appeal were as follows:

APPEALS

	Number of Cars	Per Cent of Total
Decision sustained	36,780	78.8
Decision raised	7,792	16.7
Decision lowered	768	1.7
Dockage changed	1,325	2.8
Total appealed	46,665	100.0

Although the Minnesota Inspection Department has done a good service under adverse conditions, it does not appear from these figures that the highest possible degree of perfection has been attained. It is rather surprising that during the year 1912–13 reinspection should have been called for in over one fourth of all the

cases, and that 36.4 per cent of all reinspections should have resulted in changes of the original grades or dockages. It is also an interesting fact that 23.7 per cent of all reinspections resulted in raising the grade, whereas only 6.3 per cent resulted in lowering it. Since farmers and country shippers are inclined to believe that the state inspectors grade their grain too low, these figures appear to support this view. There is also dissatisfaction among the flour millers and other buyers in that they are inclined to think that the grading is too liberal. There will probably always be more or less dissatisfaction of this sort under any system, but the present conditions have led to a widespread agitation for federal standardization of grades and inspection of grain.

Federal Standardization and Inspection. — The desirability of uniform standards of grain and cotton grades throughout the country is apparent, and it is generally conceded that the Federal Government is in the best position to bring this about. In 1909 Congress authorized the Department of Agriculture to fix standards for "middling" cotton and eight other grades. After study and investigation standard types of the various grades were established, and sample specimens of the grades were put up in sealed vacuum tubes to serve as permanent standards. The use of these official grades was not made compulsory, but they have been adopted generally by the trade.[1] Their use has been extended and been made practically compulsory in markets where cotton is traded in for future delivery

[1] See Cobb, United States Official Cotton Grades, in Circular No. 109, Bureau of Plant Industry, U. S. Department of Agriculture, 1913.

by the United States Cotton Futures Act of 1914. Similarly, as early as 1907, Congress first authorized the Department of Agriculture to study grain grades with a view to establishing standards. This has been a difficult task, and it was not until January, 1914, that the federal corn grades were promulgated. These are not compulsory, but within a few months they had been adopted by several state inspection departments and by many grain exchanges. In general, it has been the primary markets of the Middle West that have adopted them; the eastern seaboard markets have not shown a disposition to use federal standards.

The question of actual federal inspection and determination of grain grades is another matter the agitation for which has developed to such a point that legislation providing at least for some kind of federal supervision is likely to be passed within a short time. The desire for federal inspection comes primarily from the producers and is based on several considerations. In the first place there is the general feeling of suspicion against exchange inspection as representing only the interests of terminal dealers, and against state inspection on the ground that the efficiency of state departments is impaired by political considerations and that they are too apt to be favorably disposed toward the powerful grain and milling interests as against the farmer. Feelings of this sort are accentuated among farmers of a state who have to rely on the inspection service of another state. North Dakota, the largest wheat-producing state in the Union, has no primary market, and the growers of that state have long chafed

under the fact that their grain is sold under Minnesota gradings at Duluth and Minneapolis.

Then there is the question of jurisdiction of state departments. Kansas wheat is marketed largely at Kansas City, Missouri; the Kansas inspection department has tried to compel Kansas inspection on grain arriving at terminals in Kansas City, Kansas. If taken from there to public elevators in Missouri, it is then subject to Missouri inspection. Not satisfied with Kansas inspection, the Kansas City (Mo.) Board of Trade has established its own inspection department, and has stopped using Kansas gradings. The Board of Trade and Missouri State Inspection departments appear to live peaceably together, but there is often double inspection, with double charges assessed on shippers. Somewhat similar questions of jurisdiction have arisen between the Minnesota and Wisconsin inspection departments at Duluth and Superior. Such conditions are most unsatisfactory and furnish one of the strongest arguments for federal inspection or supervision.

The first bill providing for federal inspection of grain carried in interstate commerce was introduced by Senator McCumber of North Dakota in 1903, and has been regularly reintroduced since that time. At first, it did not attract much attention, except for opposition expressed by the established grain interests. The recent awakening of interest in grain marketing has resulted in a keen interest in the problem, however, and serious attention was given to it by Congress in 1914 and 1915. The demand for federal legislation has been growing rapidly and not only farmers' organizations, but even

important grain exchanges, including those at Duluth and Kansas City, have formally indorsed the movement. The flour millers also finally indorsed federal inspection in 1914 through their national organization. Opposition has been expressed by some of the leading exchanges and by the National Council of Grain Exchanges; the eastern exchanges are uniformly opposed to federal inspection. It is felt that any government system is apt to be too rigid, that there will be too much conflict between federal and state authorities, and that such an extension of federal authority would be unwarranted.

During 1914-15 the McCumber Bill was defeated in the Senate. A feeling has developed that actual government inspection is too radical a step, and consequently a compromise was sought through the Lever Bill, which provided for federal supervision. Congressional hearings were held on the subject, and finally the Moss Bill providing for federal supervision was introduced. This bill provides that grain inspectors be licensed by the Secretary of Agriculture, and that in case of disputes over grades appeal may be made to the Secretary of Agriculture. It does not provide for the organization of a separate inspection department because under it state and exchange inspectors may also be licensed as federal inspectors. The bill also provides for federal standardization of grades. Although it is a compromise measure, utilizing the present inspection departments instead of creating a new one, it appears that it might yield all the benefits that could be expected from actual federal inspection. The probabilities are that some such legislation as this will be passed in the near future.

Mixing of Grain in Terminal Elevators. — An interesting practice of the grain trade, which has a very vital relation to the problem of inspection and grading, is that of mixing grain of various grades in the terminal elevators. The main object of mixing is to raise the grades of inferior or low-grade grains by combining them with grains of higher grade. For example, if one car of No. 3 Northern wheat is mixed with five cars of No. 1 Northern, the chances are that the whole will grade No. 1 Northern when it comes out of the elevator. The elevator company therefore makes a profit, since it buys the No. 3 wheat at the No. 3 price, and sells it at No. 1 price. That this practice of mixing is done on a large scale, and that it is an important source of revenue to the terminal elevator companies is evident from the following table which shows the number of bushels of various grades of wheat received into and shipped out of twenty-nine elevators in Minneapolis during the two years from Sept. 1, 1910, to Aug. 31, 1912.[1]

It will be seen from this table that the shipments of No. 1 Northern and No. 2 Northern greatly exceeded the receipts of wheat of those grades, while on the other hand, the shipments of the other grades were less than the receipts. The fact that the shipments of No. 1 Hard were less than the receipts of that grade indicates that a certain amount of this highest quality wheat had been mixed with the lower grades to bring them up to No. 1 Northern and No. 2 Northern. In other words, the No. 1 Hard that was used in mixing came out as a lower

[1] Annual report of the Chief Inspector of Grain of Minnesota for the year ending Aug. 31, 1913.

grade, while large proportions of the Nos. 3 and 4 Northern, "rejected," and "no grade" were raised through the mixing process.

RECEIPTS AND SHIPMENTS[1] OF NORTHERN SPRING WHEAT BY GRADES
MINNEAPOLIS ELEVATORS, SEPT. 1, 1910, TO AUG. 31, 1912

GRADE	RECEIVED (Bushels)	SHIPPED (Bushels)	EXCESS OF	
			RECEIPTS OVER SHIPMENTS (Bushels)	SHIPMENTS OVER RECEIPTS (Bushels)
No. 1 Hard	586,600	276,484	310,116	
No. 1 Northern . .	15,571,575	19,978,777		4,407,202
No. 2 Northern . .	20,413,584	22,242,410		1,828,826
No. 3 Northern . .	9,777,031	7,664,232	2,112,799	
No. 4 Northern . .	2,812,653	624,433	2,188,220	
Rejected	1,175,513	621,773	553,740	
No grade	4,695,565	1,000,945	3,694,620	

The prevalence of this practice has been used by the defamers of present-day grain-marketing methods as *prima facie* evidence that the terminal elevators are robbing the farmers. It is contended that since the shipper is paid on the basis of the original grade, he does not get the full value of his wheat, and that there is no reason why the elevator company should reap all the profit from mixing. On the face of it, the practice does look questionable, and it is no wonder that agitators and demagogues have seized upon it and used it to the

[1] Receipts include amounts on hand at beginning of period, and shipments include amounts on hand at end of period. The omission of Durum and winter wheats in this table renders the totals of receipts and shipments non-comparable.

utmost extent — often with telling effect — as evidence of the predatory operations of the "grain gang." A statement of the actual facts in the case reveals how unfounded these charges are, and that mixing is a perfectly legitimate practice in the grain trade.

In the first place, mixing involves a certain expense to the terminals. This is particularly true when the inferior grades are cleaned before mixing. Special machinery is needed for cleaning, and there is the cost of operating this machinery as well as the elevating from bin to bin, — expenses which vary with the amount of handling necessary. More important than this, however, is the fact that the terminal elevator buyers take into consideration the possibilities from mixing when they buy the wheat when it first comes to market. Obviously, they would be willing to pay more for No. 3 wheat if they thought they could raise it to No. 2 or No. 1 by cleaning and mixing, than if they knew they would have to sell it as No. 3. The terminal elevator men are expert judges of wheat, and they examine each sample with great care and consider every possibility of value in making their bids. Since there is keen competition among the mixing houses, the business has been reduced to a science, and the profits from this operation are no more than normal. Since they consider the mixing value of wheat when they buy it, the possibility of mixing — and this is the important point — raises the prices of the low-grade wheats. Since any possible depression of the price of the higher grades due to the greater quantity after mixing is at least offset by the greater demand for the higher grades to use as a basis for mixing, the net

result is that the average price of wheat paid to farmers for all grades is higher than it would be if mixing were not allowed. In Canada, mixing is not permitted and as a result there is a much wider variation in price between high-grade and low-grade wheats than there is in Minneapolis.

One disadvantage that results from mixing is mentioned in the chapter on Future Trading, where it is explained that as a result of this practice the terminal elevators, in delivering wheat on contract, always deliver mixed wheat at the very bottom edge of the contract grade. Whether this is a serious disadvantage or not depends first on the width of the grade, *i.e.* the variation in quality permissible in the grade. As a matter of fact, although flour mills commonly take elevator wheat, they prefer to buy current receipts of unmixed wheat as it comes from the country — and mix it themselves. Also, it is apparent that whether any evils grow out of mixing depends largely on the disinterestedness of the inspection service, and on its ability to maintain the same grading standards throughout the year. If it is more liberal in its grading in the spring than in the fall, the elevator companies will find it easier to make the contract grade and injustice will have been done to shippers; if the grading is more severe, the terminal elevators suffer unjustly. This important phase of the grading problem furnishes another argument for some system of inspection that enjoys greater confidence than the present methods. At any rate, the foregoing facts indicate that mixing is not the undesirable practice that many would have us think, but that on the

whole it is an actual boon to farmers as well as to the grain trade.

Other Governmental Activities. — In addition to government activities with respect to grain and cotton grades, attempts have been made, especially by the various states, to standardize the grades of other commodities. The Federal Government passed a law in 1913 establishing grades of apples; New York and a few other states have similar laws; the New York law also provides in detail for the brands that may be used in connection with the various varieties and grades, and the law is compulsory in that all closed packages of apples grown in New York State must be marked and branded according to the law. Minnesota has adopted a state brand for butter, laying down rigid conditions that must be complied with in order to entitle a creamery to its use, and other states are following suit. Some states through their dairy and food departments have established rules governing the grading of cream. There is a pronounced movement on foot to extend state activities in this direction, and some states are considering the establishment of state grades and brands for farm products in general.

Packages. — Closely allied to the question of grading is that of packages. Some commodities are handled in bulk, as, for example, grain in the Middle West; others are baled, as in the case of cotton; still others are packed in packages, and these include the great majority of farm products. A complete discussion of packages would involve many technical and detailed descrip-

tions,[1] but there are a few general principles that may be mentioned here. In the first place packages are of two general types, non-returnable or "gift" packages, such as peach baskets, and returnable packages, such as chicken coops. As for gift packages, the producer usually bears the expense; it is his aim to use a package which is at the same time strong, light, attractive, and cheap. The increasing cost of lumber makes this a more and more serious problem, and for some highly perishable commodities for which the farmer receives but a small proportion of final price, the cost of the package is a serious item of expense.

The principal functions of a package as enumerated in the Report of the New York Mayor's Market Commission are as follows:[2] (1) to furnish a convenient means for handling the goods; (2) to furnish protection from physical damage to the contents; (3) to furnish security from pilfering; (4) to prevent loss of finely divided or ground products; (5) to furnish a measure of the contents; (6) to furnish ventilation to the goods; (7) to furnish a means whereby the goods carry marks of identification, shipping directions, notices of quality, compliance with laws, advertising, etc.; and (8) to insure cleanliness of the contents. Packages vary greatly according to the characteristics of the commodity and according to local market custom. Berries receive injury from their own mass weight and from lack of

[1] A good description of the various kinds of packages in common use may be found in Higgins, Marketing Farm Products, Bulletin No. 17 of the Vermont Department of Agriculture, St. Albans, Vt.

[2] P. 186.

ventilation, and are consequently packed in shallow and open containers. Apples are packed in barrels in the East, and in boxes in the West. Boston has a preference for bushel boxes, and consequently receives many commodities in these containers that go to other markets in sacks and barrels. The size of packages depends on ease of handling, and convenience to retailers. The latter consideration is perhaps the more important, because it is largely the convenience to the retailer that has determined the size of the egg case, the orange box, the apple box, the butter tub, the bushel box for vegetables, etc. Some goods are packed in containers that are suitable for retail purchasers, such as the butter carton, the egg carton, the berry box, etc., and there is an increasing tendency for both shippers and wholesalers to adopt small packages that go through to the consumer unbroken, especially in the case of products of high quality.

Owing to the tendency to use undersized packages and because of the great variation in size and style of packages in different parts of the country — distinct weaknesses of the present marketing system — steps have been taken by states and Federal Government to protect consumers against dishonest weights and measures and to standardize packages. Practically all states have some regulations regarding weights and measures, some of which have been very effective,[1] and the Federal Government has amended the Pure Foods and Drugs Act so as to require the markings of net

[1] See *Annals*, November, 1913, for description of state law governing weights and measures in New Jersey.

weights on packages entering into interstate commerce. States have adopted standard bushels and barrels, and in 1915 Congress passed the Standard Barrel Bill, which specifies the dimensions and capacity of the standard barrel, and prohibits the sale or shipment of fruits and vegetables in barrels that have any smaller capacity.

CHAPTER XVIII

CITY MARKETS AND DIRECT MARKETING BY PARCEL POST

Development of City Markets for Near-by Products. — As towns develop into cities of moderate size farmers in the immediate neighborhood begin to grow truck crops for the local market. At first, they either peddled them around from house to house, or to the city retail stores. Both of these methods were time-consuming from the standpoint of the farmer, and it naturally came about that they would congregate in one place near the heart of the city where either consumers or retail storekeepers could come and make their purchases. Generally some open square or accessible side street was used for this purpose, and these market places came to be known as the " market square," or the " farmers' market," or the " curb market," or the " open market." The next step was for the city or some enterprising business man to definitely set aside some location for this kind of market, and generally to furnish sheds and often platforms where the farmers could unload their wares and be protected from the sun and from inclement weather. In an organized market place of this sort it also became necessary to divide up the space into stalls or definite areas, so that each farmer could be assigned to a specific place. Rentals are charged for these loca-

tions, whether they are operated by private individuals or by the cities themselves.

Those who have interested themselves in the marketing problem have seized on the public market where producer and consumer come together as perhaps the greatest possibility for lowering the price of foodstuffs for city consumers. It is contended that cities in the United States have been peculiarly negligent in adopting comprehensive market policies, and the small expenditures or total lack of expenditures for market departments have been cited as proofs of this contention. It is undoubtedly true that our cities have been lax in this respect, as well as in many other respects, but figures showing relative expenditures of different cities furnish an imperfect index of the accommodations existing for direct sale by near-by farmers, first because many cities have efficient privately owned markets, and second, because many of the municipally owned markets are not farmers' markets at all.

Marketing Functions of a City. — There is some question as to the proper functions of a city in connection with its market policy. It is generally agreed that it is proper for a city to set aside a place where near-by farmers may exhibit their wares and where they may sell to such consumers, retail storekeepers, or wholesalers as may care to visit such a market. It is usually considered that a city should derive sufficient revenue, however, in the form of stall or space rents, to cover at least the cost of administration, inspection, etc. But there are many who would not limit cities to this function, and who would have them go into the marketing

business themselves at least to a certain extent. A most extreme example of this notion was discovered in a small Minnesota city where the city erected a market building and hired a market master.[1] When farmers brought their goods to town, they would occasionally stay and sell them themselves, or leave them in the hands of the market master to be sold for them (without charge), or more commonly still the market master would buy the goods outright and resell them at the same price, not taking out anything to cover even operating expenses, to say nothing of overhead expenses. In other words, the city itself went into the merchandising business in competition with retail stores, and expenses were met out of the city treasury! No wonder that the storekeepers of the city objected, and that they were finally able to bring about a change of policy.

A less extreme example of the same nature occurred in 1914 in New York City where free public markets were opened in different sections of the city. These were meant to be largely farmers' markets, but the number of farmers that made the long journey necessary to reach them was so insignificant, that practically all the space was occupied by retail dealers. These dealers had no rent to pay and were naturally able to compete rather successfully with near-by retail stores. Should the city pay the expenses of operating such a market place? In 1915 the city authorities decided that rentals should be charged to these favored retailers.

The question of city functions also arises in connec-

[1] See article on the Food Supply of the Iron Range by the author in Studies in Marketing of Farm Products, University of Minnesota.

tion with wholesale terminal markets, and it would appear that when the space and facilities for wholesale distribution are proved to be inadequate, the city may properly buy land and furnish such facilities, provided, however, that it operates such markets on a business basis and does not go into the actual business of merchandising. Those who are socialistically inclined would probably favor a greater extension of municipal activity in these respects, but it is safe to say that the conclusions suggested above are in keeping with present-day American opinion. It is not intended here, however, to express definite conclusions on all the points raised above, because some of them are still controversial problems and need to be considered carefully in planning any scheme of marketing reform.

Advantages and Disadvantages of Public Markets. — The term " public markets " is used in a variety of senses, as, for example, the market place where farmers congregate to sell to consumers, or where they sell to retail and wholesale buyers, or the market place where retail dealers instead of farmers have stalls. The form that most people have in mind is the market place to which farmers bring their goods and where they sell directly to individual consumers, and this is the form that we are so frequently told should be developed. Some of the advantages of such direct sale frequently mentioned are as follows: (1) by eliminating all middlemen the farmer can get higher prices for his products, and the consumer can buy at lower prices; (2) consumers can buy goods that are freshly gathered; (3) the lower prices that farmers charge have the effect of keeping

down prices in retail stores throughout the city; (4) the opportunity afforded to farmers stimulates output and tends to a greater adaptation of local farming methods to city needs.

The enthusiasts who point out these advantages of this form of direct marketing generally fail to mention important considerations on the other side of the question. As a matter of fact, it is well known that public markets where farmers and consumers come together are on the whole unimportant as agencies of city food distribution. There are several reasons for this: (1) Farmers cannot afford the time to remain at the market place for a large part of the day to sell to consumers, and consequently they prefer to sell out to retail store buyers and wholesalers as quickly as possible, and return to their farms; (2) consumers in general cannot afford the time necessary to visit the market, either because of household duties (including the care of children) or because of social interests; (3) only an infinitesimal part of the food supply of a large city can be produced within hauling distance; (4) they can be in operation for only part of the year; (5) the competition of public markets although it offers some protection against extortionate prices of retail stores, cannot have so much effect in this direction as one might think because consumers are willing to pay for the superior service furnished by retail stores.

These considerations need to be enlarged upon. That farmers do not care to spend the time necessary to remain at market during the day is evident from the experience of practically all our large cities. The

great bulk of the commodities brought in by farmers is sold to retail store buyers and jobbers who congregate at the market in the early morning and buy the goods in wholesale quantities. The market places open as early as two or three o'clock in the morning in the largest cities; farmers living at a distance frequently leave their farms the evening before. Most of the big truck farmers have sold out and are on their way home before city consumers are ready to do their marketing. It is of course true that in practically all cities some farmers stay in the market to sell to consumers, and that this practice is more prevalent in some cities than in others. This undoubtedly ought to be encouraged, but the indications are that it can never be developed on a large scale — or rather restored — because this was the custom once, and during the past few decades the tendency has been distinctly in the opposite direction.

There might be more inducement for farmers to stay in the market place to sell direct to consumers if there were more consumers who availed themselves of the opportunity, but as already stated, most of them cannot afford the time to visit the markets. Studies made in Minneapolis indicate that there are two classes of consumers who most commonly visit the market place: the wealthier people, who leave their home duties in care of maids and who go to market in automobiles; and very poor people, who live in close proximity to the market. Even the number of people in these two classes is not large. But this is not all; those who buy in the farmers' market have to carry their goods away with them, and farmers are loath to sell in small quantities.

For those living at a distance from market, car fares have to be taken into consideration, as well as time, and household duties. The corner grocery, the delivery service, the telephone, the credit business, the superior variety of goods in retail stores — all conspire against the public market as a rendezvous of consumers.

That only a very small proportion of a large city's needs can be grown within hauling distance is also evident. In the first place there are many important products that cannot be raised near our large cities at all. Not to mention grain products and live stock and other great staples, there are always some products, like sweet potatoes and peaches and citrus fruits, that can be raised only in certain parts of the country. City people prefer creamery butter to farm-made butter; eggs are relatively cheap everywhere during the few months that farmers' markets can operate, and during the winter poor people cannot afford fresh eggs anyway; and only an infinitesimal part of a large city's supply of these two important commodities could possibly be produced in close proximity, even if there were no other obstacles. This means that there are left relatively few commodities that can be marketed in this way, such as home-grown fruits, and garden vegetables, — including sweet corn, asparagus, beans, cucumbers, etc., as well as potatoes, cabbages, and turnips, which are too bulky for consumers to carry home in sufficient quantity to make purchase in this manner worth while.

Partially realizing some of these difficulties, the proponents of public markets often urge that greater quantities of a city's food supply *ought* to be raised in the

vicinity. This is all very well provided we do not expect too much. Better systems of roads, and the development of auto trucking and interurban freight lines, etc., are admirable objectives, although they are effective more in getting goods to the city to be sold at wholesale, rather than direct to consumers. The recommendations of some writers on the subject seem to intimate that meat animals should be produced near our large cities; that it is foolish for Baltimore to buy cauliflower from Long Island; or for New York City to use celery raised around Kalamazoo, Michigan. One would infer that the whole tendency toward agricultural specialization according to conditions of soil and climate has been wrong.

It is unnecessary to enlarge on these points further, except to suggest that if city markets should succeed in reducing the retail prices of foodstuffs as much as agitators claim they can, it would be unfortunate for the 95 per cent or more of the farmers of the country who live at such distances from city markets that they cannot avail themselves of the opportunities afforded. The writer is perhaps too severe in his portrayal of the obstacles to a widespread development of direct marketing through city markets; he perhaps pays too much attention to the problems of marketing this other 95 per cent of the farm products raised in the country. He believes in offering every reasonable facility for encouraging this form of marketing, but he cannot refrain from pointing out certain facts and arguments which seem to indicate that those who are devoting their energies in this direction perhaps have too optimistic a view of the possible accomplishments.

It is true that one hindrance to a greater development of farmers' retail markets has been the laxity of our cities in providing adequate facilities. Many of the farmers' markets now in operation are so ramshackle and unsanitary and unattractive that few people care to trade in them. The positions of market master and other administrative authorities in charge of municipal market departments have usually been filled by politicians who have known nothing about marketing problems, and who have allowed the city markets to become antiquated and inadequate. The present-day interest in marketing will undoubtedly lead to more intelligent market policies, but the indications are that the public-market idea may be overdone and that many people who expect to see a radical reduction in city retail prices through the development of this form of direct marketing are doomed to disappointment.

Municipal Wholesale Markets. — Before the development of efficient means of transportation, cities were largely dependent on goods grown in close proximity, and these goods were commonly sold by producers to consumers in central market places, or by peddling from house to house. As cities have grown, not only have near-by farmers found it convenient and necessary to sell to a class of wholesale middlemen but also with the development of transportation facilities, goods shipped in great quantities from outside points have also required the development of wholesale marketing systems. In Europe the cities themselves have provided housing facilities for the wholesale trade, in the shape of great market halls, whereas in the United States, this matter

has been left principally to private initiative with the result that wholesalers are commonly housed in separate, privately owned buildings located in close proximity to each other.

Many students of the marketing problem, especially some of those who have realized the futility of effecting any substantial reduction in city prices by means of direct marketing in farmers' markets, have turned their attention to conditions surrounding wholesale marketing. They have pointed out that wholesale districts are often poorly located with respect to transportation facilities, thus necessitating an unnecessary amount of trucking; that they are often poorly located with respect to the principal consuming sections, as in New York; that they are frequently seriously congested, thus hampering the free movement of goods and causing unnecessary delays and deteriorations, as in Chicago; and that wholesale districts are poorly supplied with means of refrigeration and storage. For these reasons they urge that cities themselves should provide great terminal markets, located so as to be reached directly by railroad tracks and steamship lines and at the same time near the principal consuming districts, and equipped with adequate cold-storage facilities, etc. In the largest cities it is being urged that there should be a number of such public receiving markets located in different parts of the city.

The question involved in this case is largely the problem of municipal ownership *vs.* private initiative. Some of the wholesale markets are poorly located, owing to historical reasons, as described in Chapter IV. In some

of them, there is undue congestion, and there would undoubtedly be a saving, at least in overhead charges, if the wholesale trades were concentrated into huge market buildings. Such a scheme would probably have to be carried out, if at all, by municipalities themselves, because private initiative leads to the system of separately owned and operated buildings located, nevertheless, in close proximity to each other. To determine definitely whether municipal markets would substantially reduce the cost of marketing, it would be necessary to compare the costs under the two systems. This cannot be done adequately, but there are certain facts bearing on the problem which are worthy of consideration.

In the first place, savings would undoubtedly be possible through better locations with regard to transportation, etc., and through concentration and unified control. On the other hand, it would require an immense outlay of money to provide adequate facilities. It would be no such simple matter to transplant a whole marketing organization from one locality to another, as many would believe, although there is a movement on foot in Chicago (in 1915) to move "South Water Street" to another section of the city where undue congestion may be obviated. There is no indication whatever that the establishment of a municipal wholesale market will alter the channels of trade in the slightest; the system of wholesale receivers and jobbers would still be necessary. Adequate cold-storage facilities now exist in all our principal markets and in close proximity to, or in the midst of, the wholesale sections, but it would of course be an advantage to have such facilities a part of one great

plant. It is claimed by proponents of such markets in New York that they would save consumers 20 (or is it only 10?) per cent in their cost of foodstuffs. Since the wholesale trade now takes out less than 10 per cent on the average, the absurdity of such claims is manifest. In other words, there would be possible savings from such an institution, but the savings would be so slight per unit of products handled, that it is questionable whether they would be reflected through to retail prices to any appreciable extent. The establishment of public wholesale terminal markets may become necessary if private initiative does not bring about a better location of wholesale districts and obviate overcongestion, but it would be a very radical undertaking and the problem should be approached with great caution and careful, dispassionate investigation, before any important steps are taken in this direction, especially in view of the fact that so many people have false notions as to the reduction in the cost of marketing that would be made possible.

Marketing by Parcel Post and Express. — Another form of direct marketing that has received a great deal of attention is that of sending goods direct from farmer to consumer by parcel post and express. The establishment of low postal rates on packages in 1913, coming at a time of great popular interest in the marketing problem, has caused the directing of special attention to the use of the mails. The Office of Markets of the United States Department of Agriculture has made extensive experiments in the shipping of perishable commodities over various distances and in different kinds of packages. The Post Office Department has

done much to try to popularize this method, and has had postmasters in various cities collect and publish the names of farmers who have products to ship. As a result, a considerable traffic has been built up in this way.

It has been proved that with proper care perishable and fragile commodities can be shipped by parcel post with surprising success. During investigations made by the Office of Markets there were shipped 9131 eggs in lots of from 1 to 10 dozen each over various distances, and out of this number only 327, or about 3.6 per cent, were broken, and about one third of these were broken so slightly that they still could be used.[1] Butter has been shipped successfully, although there is danger of melting in warm weather and in heated mail cars during winter. If chilled just before shipping and immediately on receipt, and if posted with respect to train time and over relatively short distances, however, butter may be carried with a fair degree of success. Even strawberries have been sent successfully by parcel post. Shipments from the Eastern Shore of Maryland to Washington by the roundabout route necessary have arrived in better condition than berries selling in retail stores at higher prices than the cost of the mail shipments.[2] Dressed poultry is also successfully shipped by parcel post and many a family receives a bird or two every week in this manner. Experiments have also demon-

[1] Flohr, L. B., Shipping Eggs by Parcel Post, U. S. Farmers' Bulletin, No. 594, p. 2.

[2] See Brand, C. J., in Agricultural Outlook, July 21, 1914, U. S. Farmers' Bulletin, No. 611.

strated that miscellaneous assortments of vegetables packed in market baskets or small hampers can be successfully marketed through the mails.

The great advantage of marketing perishable commodities by parcel post is that consumers may obtain them in better and fresher condition than after their passage through the regular channels of trade. Fresh garden vegetables often lose their savoriness and delicious freshness by the time they have passed through the wholesale and retail trades, whereas by parcel post they may reach the consumer within twenty-four hours of the time they have been gathered. Strictly fresh eggs are difficult to get in retail stores during part of the year, but there is a possibility that at least a limited number of consumers may receive them direct from farms the year round. For some commodities, there is also a financial saving made possible by the parcel post, but in most cases this saving is extremely questionable, especially when the extra trouble and inconvenience are taken into consideration. It does not pay to ship small quantities, such as one dozen eggs or one pound of butter, in this way, but if a considerable quantity is purchased at one time, there is some possible saving. One trouble that has been encountered is that farmers commonly overreach the mark by charging unfairly high prices for their shipments, thus undertaking to keep for themselves all of the saving made possible rather than to divide it with city consumers.

Although marketing by parcel post is extremely serviceable under certain conditions, it has its limitations, the most important of which are as follows: It can be

used for but a limited number of farm products; the buyer has no chance to inspect the commodities he is buying, and hence a rigid maintenance of definite grades is necessary — and farmers are often lax in this respect; it is difficult for farmers and consumers to find each other and to agree upon suitable conditions of sale and remittance; proper preparation for shipment involves a great deal of painstaking sorting, packing, wrapping, etc., in which the average farmer is not adept; to make the system successful, consumers must go to considerable trouble and annoyance in ordering goods in advance, in ordering larger quantities than usual, and in putting up with uncertainty as to time of arrival of goods.

These considerations, and others that might be mentioned, indicate that direct marketing by parcel post can never take the place of the usual marketing system, although it can be used in certain instances. While reading a recent bulletin issued by the United States Department of Agriculture on "Shipping Eggs by Parcel Post," the writer made a list of seventeen things that farmers must do to successfully market eggs in this manner, most of which the average farmer does not now do. The list is worth reproducing in this place.

1. Ship only eggs that are produced by healthy fowls kept under proper sanitary conditions and supplied with sound, wholesome feed.

2. If possible, only non-fertile eggs should be produced for market.

3. Fowls must be kept so that eggs will not be soiled in the nest.

4. Eggs should be gathered at least once a day (twice would be better).

5. Eggs should be stored in a well-ventilated place, which must be kept as cool as possible.

6. "It would be wise to candle every egg shipped." . . . "An egg that shows any defect should not be marketed."

7. Suitable containers must be purchased.

8. It is preferable to sort eggs by size and color.

9. Unusually long or thin-shelled eggs should not be marketed.

10. Each egg must be wrapped so that it will not be shaken about.

11. Parcel should be neat and attractive. The shipper should be supplied with good, tough wrapping paper, and strong twine that stretches very little.

12. Each parcel must be marked with name of sender (a rubber stamp is recommended for this), and also with the word "Eggs," for which a rubber stamp should be used.

13. A purchaser must be found in the city — either through acquaintances or by means of advertising.

14. The price — based on some market quotation — must be determined, and an agreement (perhaps in writing) must be entered into.

15. A method of remittance for shipments must be established.

16. Weights of packages must be ascertained and the postage determined.

17. "The producer in making an agreement with a customer should undertake to stand good for eggs lost by breakage in shipping."

The enumeration of these instructions indicates the great amount of labor and painstaking care involved in shipping eggs by parcel post. The functions of sorting, packing, establishing business connections, arranging for remittances, etc., now performed by middlemen have to be taken over by producers and consumers themselves — and mainly by producers. Unless the producer is a specialist in the raising of the particu-

lar product marketed, there is little chance of its being worth his while to undertake these functions. Greater developments of parcel post marketing are undoubtedly possible through the use of at least one middleman. A local buyer or coöperative shipping association is in much better position to undertake these functions than individual farmers, and the system is hardly worth while even then except for high-quality products for which consumers are willing to pay good round prices. The parcel post offers little if any opportunity to the poorer classes to reduce their cost of living, although in some instances informal coöperation among two or three families in ordering fairly large quantities offers some inducement in this direction.

The express companies have also attempted to encourage direct marketing and they offer superior facilities in delivering goods and collecting payment. Some of the companies have established marketing departments which give special attention to this subject and have collected the names of farmers and country shippers who have products for sale. The Southern Express Company, for example, issues catalogs containing long lists of shippers — one for dairy products, one for fruits, etc. Express companies contemplate slightly larger shipments than parcel post shipments, and a greater use of baskets and hampers. This method is advantageous for families in large cities who desire to purchase a case of eggs at a time or assortments of fresh vegetables in hampers, etc., but the same obstacles that stand in the way of a large development of parcel post marketing apply with practically equal force to the use of the express service.

CHAPTER XIX

COÖPERATIVE MARKETING

Meaning of Coöperation. — Although the word "coöperative" may be applied to any form of working together for a common end, it has come to have a special or technical meaning in signifying a particular form of business organization as distinguished from the ordinary individual, partnership, or corporate forms. Primarily, a coöperative organization is one which is owned and democratically controlled by the individuals who do business through it. It therefore differs from the individual and partnership forms which are owned by only one or by a small number of individuals. It also differs from the ordinary corporation in the following particulars: the stockholders are also the patrons of the organization; control lies in the hands of all members as individuals and not in proportion to the amount of stock owned by each; and the profits accrue to patrons not in proportion to the amount of stock owned, but in proportion to the amount of business transacted through the organization by each.

These characteristics are usually attained by using the corporate form, but with certain essential modifications, as follows: first, each member is usually allowed but one vote, irrespective of the number of shares that

he may own, although in some cases voting power is allowed in accordance with some measure of patronage, such as the number of acres of orchard owned by each member of a fruit association; second, in order to insure a widespread distribution of stock, and to prevent any small group of people from exercising a preponderating influence in the affairs of the organization, the number of shares of stock that any one person may own is strictly limited; and third, the organization is either run on a no-profit basis, or else provision is made for the division of profits over a fair rate of return on capital on the basis of business contributed by each rather than *in the form of dividends on stock.*

The Division of Profits. — The most important feature of coöperative organizations is the method of dividing profits, which is accomplished as stated above either by operating on a no-profit basis, or by means of the patronage dividend. The no-profit basis is perhaps preferable when it is possible. The simplest example of this method is the live-stock shipping association, which requires no capital investment on the part of its members, and which is usually not even incorporated. The association engages a manager who assembles by telephone the contributions of individual farmers who have stock to ship, and who is paid a salary based on the amount of stock that he handles (usually six cents per hundred pounds). Instead of being paid for their stock by the local manager when they bring it to town, the members await the returns of the shipment. When returns come in, deductions are made to cover actual expenses, including the manager's stipend, and the remainder is divided among

the members in accordance with the amount that each contributed to the shipment. In this case, since no profits are accumulated, there is no need of any device for the distribution of profits at the end of the year.

The same result is obtained by many coöperative creameries in a similar manner. The members who haul cream forego payment for their contributions until the end of the month. Then from the gross proceeds from butter sold during the month are subtracted the salary of the butter maker and other expenses, including generally interest on capital invested and a small sinking fund, and the remainder is divided among the patrons in accordance with the number of pounds of butter fat that each has contributed. Under this plan there are left no profits to be divided at the end of the year, — only enough to pay a dividend on stock which represents a fair rate of interest on capital invested. In some communities in Minnesota creameries were built years ago by the farmers without incorporating or subscribing stock, but by borrowing money on a joint note, and after the notes were paid off by subtracting a certain amount from each pound of butter sold, the coöperating farmers had no tangible title to the property. Such creameries are generally considered the joint property of the community, and furnish splendid examples of co-operation. In one of these communities the farmers say that the creamery belongs to no one in particular, but that when every one moves away, the last to leave may consider that it belongs to him!

The no-profit method is also used by the California Fruit Growers' Exchange — the largest and most im-

portant single example of coöperation in the United States, but it is not possible to operate all kinds of business safely or successfully on a no-profit basis. In the coöperative grain elevator, for example, it is hardly possible to pool the contributions of individual farmers who market different qualities and kinds of grain, so they must be paid for each load when they haul it in. As a result the elevator company becomes the owner of the grain and assumes the merchandising risk of profit or loss in reselling it. To be on the safe side, and if managed properly, the company should normally show a profit over and above a fair return on capital invested, and the problem immediately arises as to how this profit shall be distributed in a coöperative way, *i.e.*, in accordance with the amount of business contributed by each patron, rather than in accordance with the amount of stock owned by each.

The Patronage Dividend. — The device used for the distribution of profits in such a case is called the patronage, pro-rata, or trade dividend; out of the gross profits of the year's business there is first paid a dividend on stock, which is supposed to represent the current rate of interest, and the remainder is then divided in accordance with the amount of business, or patronage, contributed by each member. Most coöperative organizations in the United States that use the patronage dividend, pay it only to members, but students of the subject generally believe that it is wise to include non-members, in order to attract their patronage, and to induce them to become members by buying stock. In order to bring this about non-members are frequently

paid patronage dividends at half the rate paid to members, and sometimes these are paid not in cash, but by crediting such non-members with the amount due toward the purchase of a share of stock, which is issued when fully paid for, thus making the non-member a member.

The coöperative creamery, if it pays its patrons cash from day to day or from week to week, must also assume merchandising risks of profit or loss, and in such case the patronage dividend is essential *to make the organization* truly coöperative. The coöperative store must also have the trade dividend, because to operate safely it *must charge current* retail prices, thus accumulating a profit if the store is managed with a high enough degree of efficiency. Since America has learned so much about coöperative principles from the Rochdale system of stores in England, too much stress is apt to be laid on the patronage dividend as an essential feature of all kinds of coöperation, although when the no-profit method of operation is possible, no provision need be made in the by-laws for the patronage dividend. This point is emphasized here because it is so frequently stated that certain organizations are not truly coöperative because they do not have the patronage dividend. The no-profit method of operation is just as truly coöperative — and even preferable where possible, as suggested above. The usual statement, that the three essentials of coöperation are the "one-man-one-vote," the limitation of individual stock holdings, and the patronage dividend, might well be changed to read the one-man-one-vote *or the vote by patronage*, the limitation of in-

dividual stock holdings, and *either the no-profit method of operation or the patronage dividend.*

Conditions Necessary for Successful Coöperation. — There is no magic about coöperation; it is not worth while to coöperate just for the sake of coöperating. There must be some real service to perform — either because of a lack of marketing facilities, or dishonesty of local buyers, or some other vital reason, before a farmers' economic organization should be called into existence — and then only unless steps are taken to insure efficient management, — at least as efficient as that of the individuals or firms with which the new organization must compete. Mr. G. Harold Powell, general manager of the California Fruit Growers' Exchange, and author of *Coöperation in Agriculture,* says that coöperation must be borne of necessity, but this is going a little too far; better say that some tangible economic saving or improvement must result in order to make coöperation successful. In other words the "coöperative spirit" we hear so much about is apt to be a result of successful economic endeavor, rather than the cause of it.

Other essential features are that a coöperative organization must have sufficient business to make it worth while; sufficient capital to carry on its business efficiently; sufficient loyalty on the part of its members to stick to the organization in the face of fierce competition to which it will be subjected; and sufficient patience to build up the organization gradually and not expect it to be a whirlwind success from the start. Most farmers have exaggerated ideas about the possible savings from

coöperation, and are disappointed with the results of the first few months of operation. Unless marketing facilities are actually non-existent, a farmers' organization must compete with experienced specialists already in the field, and unless it can perform the service with greater efficiency or by eliminating some wasteful method, there is no reason for its existence. These things cannot be accomplished without efficient management and improved business methods, which are perhaps the principal essentials to success.

The country is strewn with failures of coöperative enterprises, largely due to inefficient management. Farmers are loath to pay high enough salaries to get competent and experienced managers. Investigations made in Minnesota indicate that the managers of successful farmers' elevators are paid substantially higher salaries than those of elevator companies which are on the ragged edge or are seriously losing money. There are elevators that market from $100,000 to $200,000 worth of products with managers who have had practically no experience in the grain business, who know nothing about accounting, and who are paid from $50 to $60 a month. The farmers think they are saving money! One of the greatest needs is for efficient accounting systems, and fortunately this need is beginning to be supplied, especially by the Office of Markets of the United States Department of Agriculture which has skilled accountants studying this problem, and which during the first half of 1915 had already issued bulletins containing carefully worked out accounting systems for coöperative organizations. Education of

farmers in the fundamentals of marketing, education of managers in the technique of marketing methods, and the perfection of simple and efficient accounting systems are all necessary before we may expect a more widespread development of coöperative marketing.

Benefits Derived from Coöperation. — In many fields, however, coöperation is well worth while. In the first place there are certain commodities where proper grading and packing cannot be accomplished except through coöperative endeavor. The best example is perhaps in the fruit business, where growers cannot hope to attain the highest efficiency through individual effort. The accomplishments of the California Fruit Growers' Exchange, and of the numerous apple growers' associations of the Northwest furnish valuable object lessons. The standardization of potatoes by certain eastern associations indicates what can be done. The ideal place for butter manufacture is in the small country creamery, because only when the manufacturing is performed in close proximity to the farmers who furnish the cream can the best quality of butter be made, and coöperative ownership and operation of such creameries have been found feasible and desirable. In the live-stock business there is little need for shipping associations in sections where individual farmers can ship in car lots; but in sections where farmers raise stock as a side line and have only a few head to market at a time, the shipping association performs a distinct service by eliminating the expenses of local cattle buyers who drive through the country to visit the farmers and buy their stock, and by reducing other expenses by concentrating shipments. The un-

satisfactory conditions in egg marketing have been described; the experience in other countries and a few attempts made in this country indicate the possibilities of improving the quality of eggs and methods of marketing by coöperation. By providing efficient means of marketing, coöperative organizations also serve as an inducement to farmers to raise larger and better crops.

In addition to improvements in quality and grading and packing, coöperation also saves money to the farmers (if the management is efficient) both by retaining the profits otherwise taken by local buyers (which are generally not large), and by concentrating a larger business through one shipping agency, thereby reducing unit handling costs. Although one reason for establishing farmers' organizations is to provide marketing facilities where no such facilities exist, it is sometimes worth while to start an organization because of the existence of too many local marketing agencies. This is the case with elevators in the grain trade. At many points in the grain-growing sections there are from three to six local elevators where two or three would be required at the most. As a result each elevator gets a small amount of business and the cost of handling per bushel is high, and consequently the managers take as high margins as possible. If the farmers operate their own elevator at such a point, they can concentrate their business in such a way as to reduce unit costs, and thereby obtain for themselves a higher net price for their grain. Although farmers' elevators constitute only about one fifth of all country elevators in Minnesota, they market about one third of all grain marketed in

the state, and at the points where they are located they handle at least fifty per cent of the grain marketed. In this way they are the means of saving the farmers from one to three cents (sometimes more) per bushel of grain, a saving which approximates $1,000,000 a year in Minnesota alone. This is not very comforting to the independent and line-elevator companies, but it marks a higher degree of efficiency in marketing which deserves to prevail.

In addition to the direct economic gains derived from organization, important social and business benefits result. The individualistic tendencies of farmers are partly broken down through association; they have more in common, and their coming in contact with each other at business meetings makes it easier for them to approach each other in social intercourse. Experience in a marketing association also gives farmers a more rational outlook on marketing methods, and gives them both business experience and a higher sense of business responsibility. But none of these fortunate results occur unless the farmers meet with at least a fair degree of business success, which in turn is possible only if their organization has undertaken to perform a real economic function and if it is managed efficiently.

Extent of Coöperation in the United States. — Although the United States cannot boast of a development of agricultural coöperation comparable to that achieved in Denmark and other European countries, this is not surprising in view of the newness of the country, the mixture of nationalities, the shiftings of popula-

tion, the size of farms and sparseness of rural population, and the relative well-being of American farmers. In fact, when these things are taken into consideration, it may be considered that agricultural coöperation has made rather remarkable strides, especially in some communities. The first serious attempts to organize for economic purposes occurred during the Granger Movement in the seventies,[1] but the elaborate attempts to develop coöperative marketing and purchasing at that time collapsed as suddenly as they appeared, and the unfortunate experiences of thousands of farmers postponed the more rational movement which began several years later. It was not until about 1890 that the first permanently successful farmers' coöperative organizations began to appear, especially in the form of coöperative elevators and creameries. The movement since that time has been gradual, and attended with many unfortunate experiences which have served as checks to a more rapid development.

It is among the farmers of the north-central and far western parts of the country that coöperation has made the greatest headway, — especially in Minnesota, Wisconsin, Iowa, Illinois, North Dakota, and South Dakota, to a certain extent in Nebraska and Kansas, and in Washington, Oregon, and California. It was estimated in 1913 that there were 2165 coöperative creameries in the United States, 336 cheese factories, 2020 farmers' elevators, and 1867 mutual insurance companies.[2]

[1] See Buck, The Granger Movement.

[2] See Carver, The Organization of Rural Interests, in Agricultural Yearbook, 1913, pp. 242–253.

In addition to these there were a large number of coöperative stock-shipping associations, potato-shipping associations, fruit associations, cotton warehouses, stores, etc., scattered throughout the country.

Coöperation in Minnesota. — Minnesota leads all other states in the development of agricultural coöperation, and in fact compares very favorably with some of the leading coöperative countries of the world. This is also the only important state in which adequate statistics of coöperation have been collected. The following summary shows the number of each kind of organization on Jan. 1, 1914, and the total volume of business done by each kind during 1913:[1]

	Number	Annual Volume of Business
Creameries	614	$21,675,252
Elevators	270	24,000,000
Stock-shipping associations	115	6,000,000
Stores	120	4,250,000
Fire insurance companies[2]	154	696,732
Telephone companies	600	900,000
Cheese factories	34	637,224
Potato warehouses	20	100,000
Miscellaneous	86	2,500,000
Total	2,013	$60,760,000

Among miscellaneous organizations are cow-testing associations, 11; fruit-shipping associations, 3; lumber

[1] Weld, Statistics of Coöperation among Farmers in Minnesota, *Minnesota Agricultural Experiment Station Bulletin*, No. 146.

[2] Figures represent receipts from premiums and are for the calendar year. (Forty-third Annual Report of the Commissioner of Insurance for the State of Minnesota, 1913, p. 32.)

yards, 5; laundry, 1; egg-shipping associations, 2; cattle- and horse-breeding associations, 60; wool-growers' warehouse, 1; terminal grain-marketing company, 1; butter-marketing association, 1; and terminal fruit- and produce-marketing association, 1. More than four fifths of the volume of business of these miscellaneous companies was transacted by the terminal grain-marketing company and the butter-marketing association.

The coöperative creameries are perhaps the most important farmers' organizations in Minnesota. There are 614 in all, and this is nearly twice as many coöperative creameries as may be found in any other state in the country, and nearly one third of all in the United States. Not only this, but nearly three fourths of all the creameries of Minnesota are owned coöperatively by the farmers themselves, and 42 per cent of all farmers in the state are patrons of coöperative creameries. There is no important dairy state in the Union where the butter industry is so completely controlled by the farmers themselves. In 1913 these 614 creameries made 74,934,940 pounds of butter, which, if made into ordinary pound prints and placed end to end, would reach over 5000 miles. The patrons of these creameries received about $20,000,000 for butter fat during 1913, or an average of over $32,000 per creamery. The average number of pounds of butter made per creamery was 122,000, the expense per pound of butter was 2.2 cents, the total number of patrons was 65,000, and the average number of patrons per creamery was 106.

On January 1, 1914, there were practically 270 farmers' elevators in Minnesota with an aggregate

membership of approximately 34,500, an average of 128 members to a company. One farmer out of every five in the state is a member of a farmers' elevator company. The aggregate volume of business of these companies for the year following the harvesting of the 1912 crop was about $24,000,000, of which about $22,000,000 represents the value of grain marketed, and the other $2,000,000 the value of supplies, such as coal, feed, twine, etc., purchased for members.

Many so-called "farmers' elevators" in Minnesota are not owned by farmers and should not be classed as coöperative companies. Even among the 270 elevators classified herein as coöperative, there are many which certain coöperation enthusiasts would undoubtedly exclude. But in all of the 270 elevator companies farmers own the majority of stock, and in all but 5.5 per cent of them each stockholder has but one vote, irrespective of the number of shares owned. Furthermore, in five sixths of the companies the number of shares that may be owned by one person is limited. In other words, the elevators are not only owned by the farmers themselves, but they are controlled democratically by them. As for the patronage dividend, it is in this particular that some of the farmers' elevators of Minnesota fall short of fulfilling complete requirements of coöperation. Only 26 per cent of the companies in the state distribute profits in this way, and yet the number of companies that pay over 8 or 10 per cent dividends is so small, and the capital investment of individual farmers is so slight anyway, that the failure to provide for the patronage dividend is a less serious departure

from coöperative principles than would appear at first blush.

The aggregate sales of the 125 coöperative stores in Minnesota were approximately $4,250,000 in 1913. The smallest business reported by a single store was $5312, and the largest $161,850. There are many stores that are in a very prosperous condition, and a few that have been in business for a long time, although the following figures show that the great majority of those now in business have been organized within the last six or seven years.

YEARS OF ORGANIZATION OF 62 COÖPERATIVE STORES IN MINNESOTA

YEARS OF ORGANIZATION	NUMBER OF STORES ORGANIZED
1893	1
1894	1
1899	1
1900	1
1903	1
1904	1
1905	2
1906	3
1907	2
1908	6
1909	5
1910	8
1911	14
1912	9
1913	7

Fifty-nine stores reported a total of 6610 stockholders, an average of 104 per company. Taking this as an average for the 120 stores, there are in the neighbor-

hood of 12,000 people who are members of coöperative-store companies in Minnesota. Farmers own 86 per cent of the stock and this is one of the significant features of the coöperative stores of the state; they are not found in the large cities, but are located in the villages and at country crossroads, and are owned and operated by farmers.

The form of coöperation that is gaining most rapidly at present is the live-stock shipping association, and in this respect also Minnesota far outstrips any other state in the Union. The movement began in 1908, and has been spreading very rapidly, especially since 1911. On January 1, 1914, there were 115 shipping associations in the state. On January 1, 1915, there were nearly 150. During 1913 these associations marketed about $6,000,000 worth of stock, or about 12 per cent of the total value of live stock marketed by Minnesota farmers.

An account of coöperation would be incomplete without reference to "township mutual insurance companies," of which there are 154 in Minnesota. This is the earliest form of permanently successful coöperation that developed in Minnesota. It is said that the first two companies started as early as 1867, and that of all the companies that have been started, not one has ever failed. The total amount of insurance in force on January 1, 1914, was $342,000,000, which was nearly twice as much as was in force eight years earlier. The cost of insurance in these companies has been very low; in 1913 it was 18 cents per $100. The rate charged by those stock companies which still solicit this business

is 46 cents per hundred per year on three-year contracts. On the $342,000,000 of insurance carried by the township mutuals, these companies saved the farmers of the state $957,600 in the year 1913. The actual saving is much greater than this because the rates charged by the old-line companies have been forced down by the competition of the farmers' companies.

Coöperative Terminal Marketing. — Most farmers' marketing organizations undertake the marketing of their products only at country points, and, in fact, this is the field in which they can perform their most useful services. The wholesale trades in the great staple commodities are so well organized and perform their functions on such small margins that it is questionable whether farmers can effect any appreciable saving by undertaking this function through their own organizations. In foreign countries, coöperative terminal marketing has developed to a certain extent, and in Denmark farmers even have their own exporting organizations. In the United States there have been but few attempts in this direction, and most of them have been failures. In the case of perishable commodities there is a great advantage to shippers in at least having their own representatives in the various markets, to see that goods are properly handled, to inspect their condition on arrival, and to report to headquarters about market condition and prices, so that goods may be sent to the most favorable markets. This is done by the California Fruit Growers' Exchange, for example, which has its own representatives in all the principal markets. It cannot be said that these rep-

resentatives actually undertake the function of wholesale marketing, however. In the large cities they merely turn the goods over to auction companies, who sell principally to jobbers, and in the smaller cities they sell direct to the jobbing trade, thus in some cases perhaps taking the place of the broker or commission man.

Coöperative terminal marketing of butter has often been agitated in Minnesota, and there is one association which has been in existence for several years and which has been the agency through which large quantities of butter have been marketed. It has contented itself by selecting certain wholesale receivers in New York, Philadelphia, and Chicago, to whom the various creameries send their shipments. The association derives its revenue from a small fee per tub, paid by these wholesalers, and although it cannot be said that this form of coöperation has led to any changes or economies in the established marketing methods, there has been some benefit to the creameries through the general supervision of a manager who has constantly looked after their interests in connection with transportation matters and the like.[1] Much greater benefits might accrue from such an organization if it had a system of inspection and perhaps of grading and branding, and it might possibly undertake a supervision of business and accounting methods of the creameries; whether it could be of service in establishing its own distributing houses in the East is more or less problematical; at all events the

[1] At time of writing it is announced that this association has established its own distributing house in New York City, thus taking over the functions of the wholesale receiver or commission man.

undertaking would involve considerable risk and the possibility of savings or higher prices is not very clear.

Coöperative terminal marketing of grain has been attempted both in Canada and in the United States. In Canada, the Grain Growers' Grain Company is a corporation with over 14,000 farmer members and with a paid-up capital of about $800,000. The company operates as a commission merchant in the Winnipeg Grain Exchange, and during the year ending June 30, 1914, marketed about 30,000,000 bushels of grain, with a net profit of $151,000. The company also operates terminal and country elevators, and owns and publishes through a subsidiary corporation one of the most influential agricultural journals in western Canada. It also buys supplies in car lots for local associations of grain growers. The company has been criticized by some as not truly coöperative because it does not have the patronage dividend, but the only reason why it does not distribute profits in this way is that the Winnipeg Grain Exchange construes such a method as the payment of a rebate to shippers which is not allowed to other members of the exchange. It pays ten per cent dividends and throws the remainder into reserves which it intends to use for the benefit of farmers in other undertakings. Somewhat similar organizations exist in Saskatchewan and Alberta, although the organizations in these provinces are primarily for the purpose of building and operating country elevators which are largely financed by government loans.[1]

[1] For description of these Canadian companies, see article by the author in Studies in the Marketing of Farm Products, Studies in the Social Sciences. No. 4. University of Minnesota.

An interesting experiment along this line is being attempted by the Equity Coöperative Exchange, organized among farmer members of the American Society of Equity of North Dakota, and acting as a terminal marketing agency in St. Paul, Minnesota. Formerly it had its office in Minneapolis, attempting to develop an independent market for its consignments, which it handles as a regular commission merchant. In 1914 it moved to St. Paul, encouraged by the business men of that city, who have long envied the preëminence of Minneapolis as a grain center. The company sells wheat to country elevators in the vicinity of the Twin Cities at full market prices, but it has always been at a disadvantage in disposing of low-grade wheat and coarse grains, because there are practically no local buyers outside of the Chamber of Commerce in Minneapolis. Much of its grain has really been sold through the Minneapolis Chamber of Commerce, and it has an office in Superior, Wisconsin, whence it sells to members of the Duluth Board of Trade. The company has sought recognition and patronage through such a virulent campaign of slander against the organized grain trade, against individuals engaged in it, and against the system of future trading, that a most unfortunate controversy has arisen accompanied by intense bitterness of feeling. The grain trade is organized on such an efficient basis that little if any improvement may be expected from attempts of this kind, although if sufficient business is obtained, such an organization may save to its stockholders that part of the commissions represented by profit. This could be accomplished just as well, if not

better, by operating through an organized grain exchange, as does the Grain Growers' Grain Company in Winnipeg; to establish a second exchange in practically the same market, — *i.e*, if it is possible to develop a real exchange, — would result in a certain amount of economic waste and duplication.

Coöperative Purchase. — Buying is an important phase of marketing in which both city consumers and farmers are particularly interested. Since the retail store is the most expensive factor in the marketing system, it is only natural that the principles of coöperation should have been applied for the purpose of reducing the cost at this step. Coöperative purchasing may be accomplished in the following ways: first, through coöperative stores; second, through marketing organization of farmers; third, through farmers' clubs or other associations not primarily of an economic nature; and fourth, through voluntary and temporary agreements without formal association.

The extent to which coöperative stores have been organized among farmers in Minnesota has been described above, and the reasons why this form of coöperation has not been successful among city consumers are discussed in the chapter on Problems of Retailing. Perhaps the most important method of coöperative purchase for farmers is through their organizations that exist primarily for other purposes. Farmers' elevators, for example, purchase great quantities of coal, feed, flour, twine, etc. The fact that these are permanent organizations with managers hired the year round enables them to undertake coöperative purchase as a

side line, whereas these activities alone would hardly justify the maintenance of separate organizations. Creameries and fruit associations also purchase supplies coöperatively. Farmers' clubs and local chapters of national organizations, such as the Grange or the American Society of Equity, organized primarily for social intercourse, also frequently buy goods in car lots for members.

These activities of farmers' organizations have frequently aroused a feeling of bitterness among local merchants who carry the goods bought by farmers, and as a matter of fact the extent to which farmers save money or are justified in buying in car lots from outside sources is in some respects an open question. When farmers buy from local merchants, they usually purchase in small quantities and ask for credit, whereas when they buy direct from wholesalers or manufacturers they buy in car lots and pay cash; under such conditions, local merchants could sell to farmers almost as cheaply as they can buy direct — perhaps more cheaply when it is considered that they save the farmers considerable trouble and that freight and other incidental charges are frequently left out of account by farmers in comparing their car-lot prices with local prices. Wholesalers and manufacturers often refuse to sell in car lots direct to farmers, who usually fail to appreciate the justification of such refusal. Wholesalers are intent upon building up a regular and permanent distribution for their goods, and they have established relations with local dealers for this purpose, often giving exclusive agency for their products to one dealer in each commu-

nity, who in turn builds up trade with farmers. For a wholesaler to deliberately destroy such a system that he has established by selling direct to farmers would not only be an injustice to the local dealers, but would go far to break down the safe and regular distribution of his goods, because farmers, unless they have a definite and established place of business, such as an elevator, order goods only occasionally and spasmodically. There are therefore two sides to this question, an investigation of which is being started by the Division of Agricultural Economics of the Minnesota Agricultural College at time of writing (June, 1915).

The activities of the Grain Growers' Grain Company with headquarters in Winnipeg, Canada, deserve mention in this connection. This great farmers' organization acts as an agency through which supplies are sold to the farmers of western Canada in carload lots. It distributes coal at a saving of from two to three dollars a ton; it distributes apples in car lots direct from the fruit growers' associations of Ontario; it sells flour, and has even been experimenting in the operation of a small flour mill, from which it ships direct to local grain growers' associations; it has bought a huge timber tract in western Canada, where it intends to erect saw mills, from which lumber will be distributed at cost; and it also handles fence wire and twine.[1]

[1] Weld and others, Studies in the Marketing of Farm Products, p. 102.

CHAPTER XX

PROBLEMS OF RETAILING

Reasons for High Cost of Retailing. — It has already been pointed out that retail stores are the most expensive step in the marketing of farm products, and that on the average they take out nearly as much as all other factors, including country shippers, railroad companies, and wholesalers combined. The reason for this is of course that the retailer performs more numerous and more difficult functions than any other handler of farm produce. In the first place, wholesalers and other dealers handle goods in large quantities and turn over their capital very rapidly, often specializing on a few commodities; retailers on the other hand keep large stocks, consisting of a great variety of goods composed of small quantities of each variety, and sell them out in exceedingly small quantities at a time. Retailers have to locate on expensive sites that can be easily reached by consumers, and consequently rent becomes a relatively much more important item in selling cost than is the case with wholesalers. To serve customers with a high enough degree of efficiency so as to hold trade, numerous salesmen are essential, and hence labor cost becomes an important item. While these two items alone — rent and wages — might constitute ten per

cent of sales in a retail grocery store, they would constitute less than five per cent of sales in a wholesale establishment. In other words, a very much larger volume of business can be done by a wholesaler than by a retailer on the same expense for rent and wages.

But these are not the only items that make the cost of retailing high. Consumers desire to have goods delivered at their doors rather than to carry them home themselves; competition among storekeepers and rather unreasonable demands on the part of consumers have led to more frequent and costly delivery services than appear to be entirely necessary. The demand for sanitary conditions is leading to the installation of expensive fixtures in retail stores, such as white-tile counters, large and expensive glass show cases, etc. To hold the more discriminating trade, retail groceries have to carry an increasingly large variety of goods as new brands of merchandise are introduced and advertised. Many such goods, especially those of high price, have a relatively small sale, but inability to furnish the brands and grades demanded often results in loss of patronage from good customers. Every increase in variety of stock means a larger capital outlay, a slower turn-over, and consequently a smaller net profit. The increasing desire of consumers to purchase in very small quantities, especially in the largest cities, adds to the cost of retailing; breaking goods up into small units results in greater waste, the need of more salesmen, and more time and expense in weighing, wrapping, etc. The indiscriminate granting of credit also adds to the cost of retailing.

Tendency toward More Elaborate Service. — The whole tendency in merchandising appears to be in the direction of more and more elaborate service, and consumers are responsible for this state of affairs. The wealthier classes, who can well afford to pay for these services, are not alone responsible; the middle classes, and even the poorer classes, encourage it by going to those stores which carry the greatest variety, give the most efficient service, and make the promptest deliveries. Ordering goods by telephone, buying package goods, etc., are denounced as important factors in the high cost of living. We are told that customers should go to the stores and market places, select their own goods, pay cash for them, and carry them home. But the question as to whether the modern tendency toward costly and elaborate services in merchandising is socially beneficial or not cannot be answered offhand in any such easy manner as many would think.

Over against the higher cost of merchandising caused by expensive service must be set the advantages and conveniences accruing to the consuming public. It is futile to condemn the use of the telephone by the housewife in giving daily orders; it takes much less time than going to the store, and it is undoubtedly cheaper than having the delivery boy call at the house for orders. Storekeepers, especially butchers, sometimes take advantage of telephone purchasers, it is true, but there is no objection to the use of the telephone in ordering standard package goods, nor, indeed, in ordering goods by weight or measure, because the housewife can easily weigh or measure the goods delivered. The telephone

is a great modern convenience, for which people are willing to pay; there is no reason why it should not be employed in the business of purchasing household supplies, just as it is in other kinds of business, or for social purposes. The delivery service is also a great convenience and time saver to the housewife, for which she is not only willing to pay, but which it might be argued is less expensive than the spending of the time and effort necessary to go to stores and bring home goods. Usually, however, when people expect their goods to be delivered, they demand the most efficient delivery service possible, and they are often unreasonable by ordering small lots of goods and by asking that they be delivered without delay. Coöperative action among storekeepers to limit the number of deliveries per day — or, better still, coöperative ownership and operation of a delivery service among retailers — would cut down unnecessary expense, — but it has been found that in grocery stores delivery expenses average only about two and one half per cent of total sales,[1] so that if delivery service were discontinued altogether, the saving would not be so great as some imagine.

Expenses and Gross Profits. — The expenses of retail stores are usually expressed as a percentage of total sales. Such a diversity of practices exists, however, with regard to the treatment of various items, like proprietor's salary, interest, and depreciation, that figures given out by different retail stores are practically worthless for purposes of comparison, unless indeed

[1] Sammons, W., Keeping up with Rising Costs (originally published in *System*), p. 98.

it is known that the same method of cost-keeping has been followed by all. The Bureau of Business Research of the Graduate School of Business Administration of Harvard University, in starting its study of retail shoe stores, found that before data of value could be collected it would be necessary to develop a uniform system of accounts and to get a sufficient number of stores to adopt it. In this way the Harvard Bureau has collected the most accurate data that have ever been gathered with regard to retailing. It is a curious fact that such an important field of economic activity has never received scientific consideration until recently. The Harvard Bureau of Business Research, under the able direction of Dr. S. O. Martin, is a pioneer in the field; the results already achieved in the retailing of shoes, and to be achieved in the future in other lines of retailing, are and will be of the utmost importance.[1]

The expense of doing business varies greatly in different kinds of stores. For example, according to figures collected by *System*, it averages 15.9 per cent of sales for grocery stores, 20.4 for hardware stores, 23.2 for shoe stores, 23.5 for clothing stores, 25.9 for furniture stores, and 26.2 for department stores.[2] It will be noticed that the cost of doing business in grocery stores, the principal handlers of farm products, is lower than for other kinds of stores. The Harvard figures for

[1] See Bulletins of the Bureau of Business Research, Harvard University, entitled "Object and History of the Bureau with Some Preliminary Figures on the Retailing of Shoes," "Harvard System of Accounts for Shoe Retailers," and "Harvard System of Accounts for Retail Grocers."

[2] Sammons, *op. cit.*, p. 33.

shoe stores show operating expenses ranging from 18 per cent to 35 per cent for different stores, with the figures centering around 24 per cent, thus closely approximating the average for shoe stores shown above. It was found by the Harvard Bureau, however, that the operating expenses of stores handling medium-grade shoes centered about 23 per cent, whereas in stores handling high-grade shoes, the expenses centered about 27 per cent of sales. This fact undoubtedly holds good in other kinds of stores, viz., that the stores handling high-priced articles, which stores usually give the most elaborate service, have the highest cost of doing business, and therefore take out the largest gross profits on merchandise handled.

In comparison with the operating expenses of retail stores are the gross profits taken by them on merchandise handled. It is this gross profit or margin which is referred to in the statement that the slice taken out by retailers on farm products is on the average approximately as large as the slice taken out by country shippers, railroads, and wholesalers combined. It is this gross profit of the retailer that the consumer often wonders about but about which he knows practically nothing. If he were to hear that a retailer pays 80 or 85 cents for goods which he sells for a dollar, he would undoubtedly be satisfied; if he should buy an article for a dollar, and afterwards hear that it cost the retailer only 30 cents, he would probably feel that he had been forced to pay more than the article was really worth.

Retailers must necessarily take out margins larger than their operating expenses in order to make profits.

From the standpoint of the retailer there is confusion in the minds of some people concerning the method of figuring the gross profit on individual commodities so as to make it comparable with expenses of doing business. A merchant finds that his cost of doing business is 20 per cent of sales; he buys an article for a dollar and wants to mark it up sufficiently to cover expenses and yield a profit; obviously, an increase of 25 per cent would do this. But on what shall he figure his 25 per cent? If he merely adds 25 per cent to the cost price of \$1, his selling price would be \$1.25. But his selling expense is 20 per cent of sales, or \$.25 on this particular article, so that if he sells it for \$1.25, he has barely covered expenses and made no profit. The mistake comes in figuring selling cost on one base (the selling price) and the gross profit to be allowed, on another base (the cost price); both must be figured on the same base to be comparable. To mark up a \$1 article 25 per cent on *selling price*, \$1 equals 75 per cent, and 100 per cent equals \$1.33⅓, thus affording a gross profit of \$.33⅓. The selling cost of 20 per cent would then be 20 per cent of \$1.33⅓, or \$.266, thus yielding a net profit of \$.067 on this particular article. In studies of the cost of marketing, appearing in Chapters IX and X above, all spreads or margins have been figured on final retail selling prices in order to make them comparable.

Since operating costs vary for different kinds of stores, gross profits or margins also vary for different classes of goods. According to *System's* figures, the average gross profit or "mark-up" for groceries is about 20 per cent of selling price; for department stores about 30 per

cent; shoes about 31 per cent; clothing about 34 or 35 per cent; jewelry nearly 36 per cent. If a suit of clothes is sold at a gross profit of $33\frac{1}{3}$ per cent, this means that the clothier pays $16 for the suit he sells for $24. As a matter of fact it is well known that the margin on clothing is frequently greater than this. If figures were available on ladies' furnishings, fancy goods, and millinery, some of the mark-ups would undoubtedly be astonishing. The Harvard figures on shoes show gross profits ranging from 20 to 42 per cent, with low-grade shoes centering about 23 and 25 per cent and high-grade from 30 to 33 per cent. In other words, the shoe dealer pays about $2.25 for the shoe he sells for $3; and about $4.66 for the shoe he sells for $7.

The problem of gross margins depends very largely on the rate of turn-over of stock, *i.e.*, the average inventory (cost value) of the stock, divided into the cost of the goods sold during a year. Jewelry stores have to carry a large assortment of valuable articles, and their stock-turns are low — generally less than two a year. An average grocery store, on the other hand, may turn its stock ten times; in other words it needs to keep on hand constantly only about $8000 in merchandise to make sales of $100,000 a year (costing approximately $80,000, into which the inventory is divided to determine the number of stock turns). The more frequently stock is turned, the lower the expense of retailing, and hence the smaller the gross profit necessary. In other words, small profits on a large volume of business yield as large or larger net profits on a year's business than large profits on a small volume of business. Many of the

conspicuous developments of modern retailing are based on this principle. The department store, with its very high expense of doing business, could not live if it did not carry as small stocks as possible and if it did not sell goods as rapidly as possible; hence the necessity of central locations and of extensive advertising for this class of stores. The principle is also made use of by certain low-priced clothing stores and tailors, by restaurants, cigar shops, etc.

Retail Margins on Farm Products. — It will be observed from what has been said that grocery stores, the principal handlers of farm products, have lower operating costs, take smaller gross profits, and have a larger number of stock-turns than other kinds of stores. But gross margins vary for different goods handled by the same stores. Grocers take small margins on sugar, flour, butter, and generally eggs, which move rapidly and are subject to relatively little waste, and take larger profits on teas, coffees, and fancy groceries. The retail margins on various farm products have been shown in previous chapters. A 5 cent margin on butter retailing at 40 cents is 12½ per cent; the average margin taken by retail butchers in Minneapolis and St. Paul is about 23 per cent on hog products and about 30 per cent on beef; retailers take about 33⅓ per cent on California oranges. On some farm products the margin runs much higher; retailers commonly charge twice as much for perishable fruits and vegetables as they cost, thus making their margins 50 per cent of selling price; sometimes they buy lettuce for 2 or 3 cents a head and sell it for 10 cents; and they take out similar

margins on a few other highly perishable commodities. In spite of these extreme cases, however, the most important and interesting fact in this connection is that *the retail margins on farm products, on the average, are lower than the retail margins on at least the great majority of manufactured goods.* This fact is overlooked by those who denounce retail food distributors because of the part that they play in the high cost of marketing.

Average Expenses of a Grocery Store. — Since grocery stores are such important purveyors of farm products, it is worth while to insert in this place a statement of the items of expense and the proportion of total sales that each item constitutes for an average grocery store. The figures are based on reports obtained from a large number of stores from all parts of the country and do not include stores drawing trade from customers with either small or large incomes.[1] The average gross

Average Grocery Store Expenses

	Per Cent of Total Sales
Rent	3.07
Salaries	8.46
Advertising	.83
Heat and light	.39
Delivery	2.53
Supplies	.37
Insurance and taxes	.58
General expenses	.45
Depreciation and shrinkage	.76
Bad debts	.47
Total percentage of expenses to sales	17.91

[1] Sammons. *op. cit.*, p. 21.

profit or mark-up for these stores was 19.91 per cent of sales, as compared with expenses of 17.91 per cent, indicating that the net profit is very small when based on sales and that a rapid turn-over, or large volume of business, is necessary to yield satisfactory returns on capital invested.

Retail Price Policies. — Retailers are governed only roughly in their price policies, however, by their costs of doing business. Even in the case of those articles, like butter and eggs, where there is a certain degree of correspondence between retail and wholesale prices, the changes in retail prices are often very infrequent. A store may have favorite prices that it charges for butter, such as 31 cents, 34 cents, or 37 cents a pound; it may be charging 31 cents when the wholesale price is 25 cents, but if the wholesale price rises to 26 and 27 cents, it does not raise the retail price to 32 and 33; instead, it continues to charge 31 cents until the wholesale price reaches 28, and then jumps the retail price to 34. The margin allowed in such cases shows almost no relation to the cost of doing business, at least over short periods; convenience and custom are the factors that lead to such a policy.

In the case of other articles, like oranges, bananas, etc., where the retail margin is wide, there are usually round prices, such as 40 cents or 30 cents a dozen, which show very little variation with wholesale prices. (Why should not "special at 39 cents" have as much psychological effect on purchasers of oranges as on purchasers of ladies' neckwear?) This policy of set prices or round prices is extremely important in its effect on the prices

finally paid by consumers, and often causes a crude and unscientific adjustment of prices to marketing costs, as well as to other factors of demand and supply. The same policy is followed to an even greater extent in the case of manufactured goods.[1]

Are There Too Many Retail Stores? — It was pointed out in the first chapter that the statement that there are too many middlemen may mean either that the marketing process is cut up into too many successive steps, or that there are too many dealers at each step. As for the first meaning, it was shown that subdivision of processes is merely an application of the principle of specialization or division of labor, and that oftentimes the cost of marketing may be reduced by adding more specialist-middlemen. It was also shown that the question as to whether there are too many middlemen of each class is largely one of large-scale production, — or proper size of business unit. It has been indicated that in some trades there are too many local buyers at shipping points, especially in those trades where capital outlay is considerable — as in the case of grain elevators — and that such a condition leads to a high marketing cost per unit of goods handled. In the wholesale trades, large business units are the rule, and the cost of marketing through them is relatively small. In the retail trade, however, there are a very large number of small stores, and it is often said that this state of affairs is one of the principal reasons for the high cost of marketing.

[1] Prof. H. C. Emery gives interesting cases of this phase of price making in his The Tariff and the Ultimate Consumer, *American Economic Review*, September, 1915.

It is easy to say that there are too many retailers; it is difficult to suggest a remedy for this state of affairs. Small neighborhood grocery stores are often operated by men or women who are well along in years — and who have had no experience in merchandising. It takes relatively little capital to start such a store; wholesale grocers and produce dealers are generally liberal in advancing credit; the proprietor and his family often live in the back rooms or in small apartments over the stores; and what is more, the housewives of the neighborhood do at least a part of their trading in such stores instead of going to better ones at a greater distance. Assuming that it would lower the cost of marketing if the number of stores could be reduced, the question may well be asked — How are we going to keep people from operating stores if they want to? Many a locality is served by two or more stores, where one would be sufficient and where that one could give better service to the neighborhood, although there is some question as to what would happen if its monopoly powers were limited only by the existence of stores in other parts of the city. To limit the number of stores by law would of course be out of the question. The oft-repeated statement that there should be fewer stores savors of impracticability.

Although it would be impracticable to attempt to limit the number of stores, the question might well be asked: What advantages would accrue if the number of stores were limited? Although there are some advantages from large-scale retail merchandising, as pointed out below, there are important considerations which

tend to discourage the belief that the cost of marketing would be reduced if the multiplication of stores could be prevented. The most important consideration is the fact that the expenses of operating small corner groceries in the outlying districts of a city are smaller than those of the large stores in the heart of the city. They charge no higher prices (except for certain articles that the larger stores advertise as "leaders"). This does not apply to fancy grocery stores located in the wealthy residential districts, because such stores often charge outrageous prices. The most important expense in a grocery store is for salaries. Managerial salaries are not only higher in large stores, but one clerk can take care of only a certain number of customers, and consequently more clerks have to be employed in a large store, so that this item of expense increases at least proportionately with the growth of the store. It has also been found that rent, the next largest item, as well as certain other expenses, increase faster than sales, as we approach the center of a large city. The only things that will attract customers from their small neighborhood stores to larger stores at a distance are better service, better and greater variety of goods, or lower prices; since better service and larger varieties of goods are inimical to lower prices, and since the whole tendency is for consumers to demand better service, this is the principal reason for their going to the larger stores, — rather than to get lower prices.

There are exceptions to the general conditions described above. Even with a higher operating expense the large centrally located store can turn its cap-

ital more rapidly and hence be content with a smaller net profit per sale. This is especially true of large stores located in busy parts of a city, such as important junctions of street-car lines, where great numbers of working people pass every day on their way to and from work. If such stores adopt the policy of quick sales on small profits — and if they insist on a spot-cash business — they can and do frequently undersell other stores, not only on certain advertised leaders, but to a certain extent on all goods handled. They often gain an advantage in buying goods in large quantities. Even though many families do much of their trading at such stores, they still give a certain amount of patronage to neighborhood stores, and keep them in existence. Even though there are certain advantages and possibilities of large-scale retailing, it still remains true that large centrally located stores usually have larger operating expenses than small outlying stores, and that only better service, greater variety of goods, higher quality of goods, efficient delivery service, improved sanitary appliances, etc., — all inimical to lower prices, — attract people from the neighborhood store to the large centrally located one. Another consideration which bears out this statement is the fact that chain-store companies, which mark the most important recent development in the retail grocery trade, build up their distributions not through large centrally located establishments, but through innumerable small stores located in all parts of our large eastern cities. But aside from the question of possible economies through a greater concentration of retailing, the fact remains that we have and always

will have innumerable stores and that we must study the problem with that fact in mind.

Developments in Retailing. — Since retail stores form the most expensive link in the marketing chain, it is only natural that numerous attempts to effect savings should have been made in this field, and that there should have been important developments especially in the large cities. The department store, with its wonderful service and high cost of doing business, is perhaps the most conspicuous development in retail merchandising, but is of little importance in marketing farm products except in so far as it has a grocery and meat department, in which case it is apt to cater to fancy trade at high prices, although some make their appeal to the masses with relatively low prices. The mail-order house is also an important development in retailing — not in the marketing of farm products, except in manufactured form, but to farmers as a source from which to purchase supplies. The retail stores in country towns are agitated over the competition of mail-order houses, but they are inclined to overestimate the importance and extent of this form of competition. Although the business of the principal houses runs into large figures (the sales of one company amount to about $100,000,000 a year) this business comes from all parts of the country and any single community contributes a very small part. Studies made in rural communities in Minnesota indicate that the business given to mail-order houses is less than five per cent of the business transacted by the local stores.[1]

[1] See the author's Social and Economic Survey of a Community in the Red River Valley, University of Minnesota, Current Problems Series.

Two other developments in retailing are worthy of notice, viz., the chain store and the coöperative store. Chain stores have appeared in a number of different fields, — grocery stores, cigar stores, five and ten cent stores, restaurants, manufacturers' shoe stores, etc. Chain stores in the grocery trade have developed rapidly in large eastern cities and play an important part in the marketing of agricultural products. Besides furnishing a retail outlet for groceries and farm products, they have their own wholesale distributing departments, thus largely taking over the functions of the wholesaler in the distribution of groceries, and the jobber in the distribution of farm products. A few chain-store companies buy butter and eggs and other produce direct from country shippers, but most of them rely principally on wholesale receivers or commission men for this class of products. Chain stores effect economies by buying in large quantities, by standardization of store equipment and commodities handled, by doing a spot-cash business, by effective concentrated management, and by certain savings in advertising and delivery expenses. They mark the most important recent development in the retail grocery field, and the indications are that the movement is destined to spread to other cities in the Middle West and West. They furnish an example both of integration of marketing process, and of large-scale business, although, as already pointed out, they distribute their products to consumers not through large centrally located establishments, but through innumerable small stores.

Coöperative stores have not developed in the United

States to any extent, and those that have proved successful are mainly operated by farmers rather than by city people. The wonderful development of coöperative stores in Great Britain has encouraged their establishment in this country, and indeed points to a possibility for the future. It is difficult to point out any very conclusive reason for their failure in this country. It must be observed, however, that there is no reason why a coöperative store can operate any more economically than a privately owned store, *if it gives the same quality of service,* and hence only the net profits of the private proprietor can be saved to the members of a coöperative store. The net profits of retail grocerymen are so small, however, that there is hardly sufficient incentive for people to undertake the responsibility and trouble to save this profit for themselves. In other words the possible savings are not sufficient to reward people for their trouble. Add to this the fact that coöperative stores are often inefficiently managed, and that the population of the United States is both heterogeneous and more or less shifting, and it is not surprising that the movement has not made headway in the United States.

Other Forms of Retailing. — There are other forms of retailing farm products that deserve mention. Push carts are an important factor and perform a useful service in certain parts of the largest cities, notably in New York and Chicago.[1] Hucksters distribute fruits and vegetables in large quantities in many cities, and they have the advantage of low overhead expenses and of allowing the housewife to select her own goods with-

[1] See Sullivan, Markets for the People.

out having to take the time to go to the stores. Public retail markets for farmers, in spite of their limitations as explained in Chapter XVIII, perform a useful service in some cities. The great majority of people will continue to rely, however, on the ordinary grocery stores, butcher shops, etc., and although there are certain tendencies in the direction of more efficient merchandising, the public must continue to pay for elaborate services as long as it continues to demand them. In other words a substantial reduction of retail marketing costs lies not so much in the hands of retail merchants who necessarily cater to public preferences, as in the hands of consumers themselves, who, if they desire to go to market themselves, carry home their goods, pay cash, buy in larger quantities, etc., may be able to effect considerable savings in price. As already pointed out, however, the whole tendency has been in the opposite direction, and it is a serious question whether the public cares to return to these more primitive methods of purchasing their daily supplies.

CHAPTER XXI

WEAKNESSES, REMEDIES, AND GOVERNMENTAL ACTIVITIES

THROUGHOUT the foregoing chapters an attempt has been made to describe the main features of the organization and methods of marketing as they are, without any special effort to emphasize the defects that exist. In the main, it is hoped that enough has been said to prove that many of the popular conceptions with regard to the marketing system are entirely unwarranted, and that there is perhaps no field of economic activity of such widespread interest, concerning which there is so much ignorance. Even men of scientific training have been guilty of extravagant and sometimes absurd statements with regard to shortcomings, wastefulness, and cumbersomeness of the marketing machinery. It must be evident to the reader of these pages, however, that there is ample economic justification for the main features of the present marketing organization, and that a relatively high degree of efficiency has been attained, especially in the trades handling the great staple commodities. Attention has also been called in numerous places to defects or weaknesses of the system, and it is the object of this chapter to summarize these defects, including some not hitherto mentioned, and to point out, at least in a general way, possible lines of remedial action.

Defects of the Marketing System. — It is convenient to classify the weaknesses of the marketing system under four heads: (1) those connected with marketing at country shipping points; (2) those connected with the wholesale trade; (3) those connected with transportation; and (4) those connected with the retail trade. It should be borne in mind that the defects enumerated below do not by any means exist in the marketing of all products and at all places. Very high degrees of efficiency have been attained with regard to all the points mentioned in many cases, and what is true of one commodity may not be true of another. In a general classification of this sort, it is perhaps better to say that the following weaknesses *frequently* exist, or exist in some cases.

The principal weaknesses of marketing at country points may be enumerated as follows: (1) Insufficient attention to varieties produced, to sorting and grading, and to quality of goods marketed; (2) careless packing and lack of uniformity in packages; (3) lack of knowledge of market conditions and prices on the part of farmers; (4) an unnecessary number of local buyers; (5) abuse of monopoly power when there is one buyer and price agreements, when there are several buyers; (6) poor business management on the part of local buyers, country stores, and farmers' organizations; (7) lack of honesty on the part of both farmers and local buyers; (8) poor roads from farms to country shipping points.

The principal weaknesses in connection with the wholesale trade are as follows: (1) Opportunity for

fraud and sharp practices, including a general infraction of the principles governing the relations between agents and principals; (2) lack of adequate inspection system; (3) congestion of wholesale districts and poor location with regard to transportation terminals; (4) lack of adequate price-quotation systems; (5) insufficient means of securing and disseminating information with regard to crop conditions, crop movements, market conditions, etc.; (6) lack of uniformity of methods, customs, grades, packages, trade terms, etc., in different markets; (7) control of auction companies by cliques of traders who handle commodities sold at auction.

Some of the weaknesses of the transportation system are: (1) Delays in transit, causing late arrival of perishables in market; (2) lack of refrigerating and other facilities for handling perishables at freight terminals; (3) ill-adjustment of rates between localities and between commodities; (4) carelessness in handling; (5) insufficient car supply during seasons of heavy movement; (6) lack of uniformity in adjusting and delay in payment of claims for damage; (7) unfair icing charges; (8) lack of attention to the development of trolley freight service.

The defects in the retail system, the most expensive element of the marketing system, are more difficult to enumerate, but the following may be mentioned: (1) dishonesty in weights and misrepresentations as to quality; (2) unsanitary conditions; (3) overstocking of commodities with consequent deterioration in quality before sold; (4) too liberal a policy with regard to granting credit to consumers; (5) delay in payment for goods bought from wholesalers; and (6) unnecessary

duplication of delivery and other equipment and services. There are many other weaknesses in connection with poor business management. Certain reasons for the high cost of retailing can hardly be laid at the doors of merchants, but rather are due to the desire of consumers for expensive service, including prompt deliveries of small orders, etc.

Remedies. — It will be observed from this enumeration of defects in the marketing system that they are not only very numerous, but that they are of great diversity. Intensive studies of marketing individual commodities will reveal many more shortcomings, most of them of a special nature. A sane program for remedying these defects must be based on careful, dispassionate investigation of various practices involved in the handling of individual commodities. A remedy which will cure weaknesses in the marketing of butter will not be applicable to the system of marketing hay. It follows that there is no single or simple universal remedy, or no revolutionary process which may be applied effectively. Numerous examples have been given in preceding chapters of steps that have been taken to improve conditions; the remedies that have been and may be applied in the future may be classified broadly under four heads: (1) coöperation among farmers and among consumers; (2) associative effort on the part of middlemen; (3) education; (4) government regulation. The development of direct marketing through public markets and by parcel post and express might also be included, in spite of the limitations which render this method practically impossible for the great bulk of farm products raised in the country.

As for coöperation among farmers, it has been pointed out that farmers' organizations are of special benefit in overcoming the defects of marketing at country points; coöperation on the part of consumers through coöperative stores or through informal arrangements to buy in large quantities offers some hope of reducing the cost of living, although it has been shown that the savings made possible by coöperative stores are not sufficient to attract city consumers to assume the responsibility and give the time necessary to their development as yet. The suggestion to reorganize the whole system of marketing from producer to consumer along coöperative lines is impracticable and fanciful. On the whole, the wholesale trades have reached a high degree of efficiency, and there is no reason to believe that that efficiency can be increased, or even approached, by applying the coöperative principle. Furthermore, the defects of the present system can be remedied much more easily in other ways than by attempting any such revolutionary methods. Coöperation has its place, and deserves propagation and direction along business lines, but let us not be misled as to its possibilities.

One of the most potent factors in the development of marketing efficiency has been the associative action of wholesale traders through their produce exchanges and general trade organizations. The functions of these organizations in furnishing market places, in adopting rules to govern trade practices and to eliminate dishonest dealing, and in acquiring and disseminating market prices and information have been described in detail. It is not generally realized how beneficial these organiza-

tions really are, and partly because of misinterpretation of their objects and functions by certain classes of people, they have never received the credit due them. It is true that many of the large exchanges are too self-satisfied and too contemptuous of public opinion to lead them to bring about certain reforms demanded of them, and that some of them have resorted to monopolistic practices which have brought them into ill-repute, but on the whole they represent the highest type of marketing efficiency that has been reached, and they are constantly increasing this efficiency as well as raising the standard of commercial honesty.

Education as a remedy for marketing deficiencies should take a large variety of forms. In the first place the general public should be taught about the methods of marketing and functions of middlemen so as to disabuse their minds of the gross absurdities frequently voiced. The fundamentals of marketing should be taught in every elementary economics course, and there should be special courses in all colleges and universities which aim to offer a comprehensive treatment of the field of economics. Courses in marketing are now being given in many agricultural colleges, but on account of a lack of scientific literature on the subject, and judging by the opinions expressed by some of the teachers, it is not certain that valid principles are being taught in all cases. Special courses should be given to educate managers for farmers' organizations, and our educational institutions, especially schools of commerce, etc., should also undertake to teach the principles of retail merchandising. Consumers must be educated to the fact that the elaborate services

that they encourage and demand from retail stores add to the cost of marketing and to the prices of goods. But most of all — or as the first step — the truth about the marketing system must be made available to the public so as to destroy the misconceptions that have arisen through ignorance and through the writings and preachings of ill-informed reformers.

Finally, we come to the question of governmental action as a remedy for the defects of the marketing system. Numerous instances of laws passed by the states and Federal Government cited in preceding chapters indicate the extent to which government control is now exercised and suggest many fields for possible extension. State laws governing the grain trade, cold-storage warehouses, the grading of apples, etc., have been referred to, and it has been seen that the Federal Government has enacted legislation governing future trading in cotton, establishing a standard barrel, etc. There are also many laws and city ordinances which, although intended primarily for other purposes, have direct bearings on the methods and costs of marketing various commodities. The internal revenue taxes on oleomargarine, renovated butter, and adulterated butter, the pure-food laws, city ordinances controlling milk supply and distribution, and the supervision of weights and measures, and many other laws are cases in point. Special state laws for the control of commission merchants, the activities of state marketing commissions, and the activities of the Federal Government through the Department of Agriculture, however, deserve more than passing notice in this place.

State Laws Governing Commission Merchants. — The awakened interest in marketing has led to the introduction of laws designed to bond and license and otherwise supervise commission merchants in a large number of states, especially during 1914 and 1915. Minnesota has had such a law since 1899, and New York passed one in 1913. Other states, including Kansas, Colorado, and Alabama, passed laws in 1915. It is claimed that the Kansas and Alabama laws were rushed through the respective legislatures without the wholesale dealers' knowing anything about them. These laws apply only to the sale of products on a commission basis, and do not apply to wholesalers who buy goods outright, — except in Alabama, where it applies to all wholesale dealers in foodstuffs. There are indications that the rapid movement toward legislation in this respect will result in many poorly drawn and imperfect laws.

The Minnesota statute provides that any dealer who handles goods on consignment must obtain a license from the Railroad and Warehouse Commission, the fee for which is two dollars, and execute a bond to the state for the benefit of consignors. The bond for grain commission men must be at least $4000, and for the handlers of other farm products, $2000, but may be larger at the discretion of the Railroad and Warehouse Commission, which may require confidential business statements from the licensees for the purpose of fixing or changing the amount of the bond. The law requires that grain commission men shall make returns to shippers within twenty-four hours from time of sale, giving the name of the purchaser, the price, and the day, hour, and minute

of sale, and that commission men handling other products "shall render a true statement in writing to the consignor within such reasonable time and in such manner and form as may be prescribed by the Railroad and Warehouse Commission." In case of complaint from a shipper, the Railroad and Warehouse Commission has the right to investigate any transaction and to examine the books of any commission man. Through a ruling of the state attorney general in 1899 live-stock commission men have always been exempt from the law, on the ground that it was not the intention of the legislature to have the terms "agricultural products" or "farm produce" apply to animals.

The number of complaints registered under this law has been surprisingly small, due partly perhaps to ignorance of the laws' existence, and partly to a feeling that it is hardly worth while to proceed under it. It may also be an indication that there has not been so much dissatisfaction among shippers as most people imagine. The number of complaints was larger in 1913 and 1914, however, than in previous years. In 1914 the Railroad and Warehouse Commission reported forty-five complaints;[1] of these, twenty-eight had to do with shipments of hay and straw, and the rest with miscellaneous products, such as eggs, butter, poultry, strawberries, potatoes, cabbage, apples, etc. In two cases, licenses of commission dealers were revoked because of failure to make satisfactory returns. Most of the other cases were

[1] *Annual Report of the Minnesota Railroad and Warehouse Commission*, 1914, pp. 128–133. A brief résumé of complaints and adjustments is given in these reports from year to year.

settled amicably, although in a large number of instances the Railroad and Warehouse Commission found that it did not have jurisdiction because the goods were bought outright instead of being sold on a commission basis. In 1913 the Railroad and Warehouse Commission issued an important order prohibiting a commission dealer from buying for himself consigned grain or farm produce "either with or without the consent of the consignor" or from selling the same to "any person, firm, or corporation with whom or in which such licensee has an interest."[1] This rule was aimed primarily at grain commission merchants in the Minneapolis Chamber of Commerce who frequently sold consigned grain to subsidiary companies. Under the Minnesota law, commission dealers handling products other than grain are not required to report the names of individual purchasers of consignments. Oftentimes a carload is broken up and sold to a large number of separate buyers. It is said that a dealer in Seattle, Wash., in order to show the absurdity of the Washington law which requires commission men to report the names of individual purchasers, made out an account sales for a carload of oranges, and that on ordinary ruled paper, and with one sale to a line, a strip of paper seven feet long was required.[2]

The Cole Law of New York defines as a commission merchant one who sells on commission any article of farm produce. Exceptions are made of articles sold for final consumption (*i.e.* not for resale), articles sold at

[1] *Annual Report of the Minnesota Railroad and Warehouse Commission*, 1913.

[2] *The Packer*, June 19, 1915, p. 20.

public auction, and seeds sold at retail. The term "farm produce" includes all agricultural, horticultural, vegetable, and fruit products, including meats, poultry, and eggs, but not including timber products, tea, or coffee. Every person or firm wishing to sell farm products on commission must procure a license from the Commissioner of Agriculture, and his application for such license must include the names of all members of the firm or officers of the corporation applying, as well as a statement of the farm products to be handled. The license fee is ten dollars.

Before license is issued, the applicant must deliver to the Commissioner of Agriculture a "fidelity bond with satisfactory sureties in the sum of three thousand dollars to secure the faithful performance of his duties as the agent of the consignor." Power is given the Commissioner of Agriculture to investigate on complaint any transaction involving sale of farm produce on commission, and to examine the books of commission men for this purpose. Licenses may be refused or revoked in any of the following cases:

1. Where a money judgment has been entered against such commission merchant and upon which execution has been returned unsatisfied.

2. Where false charges have been imposed for handling or services rendered.

3. Where there has been a failure to account promptly and properly or settlements made with intent to defraud.

4. Where there have been false statements as to condition, quality, or quantity of goods received or held

for sale on commission when the same might be known on reasonable inspection.

5. Where there have been false or misleading statements as to market conditions with intent to deceive.

6. Where there has been a combination to fix prices.

7. Where the commission merchant directly or indirectly purchases the goods for his own account without prior authority therefor or without notifying the consignor thereof. The law also provides that commission merchants shall make a complete report to the consignor within forty-eight hours, showing in detail the quantities of goods sold, their prices, and the items of expense connected therewith.

This law has been interpreted to mean that commission merchants may take on their own account goods consigned to them, provided they do one of two things — either obtain prior authority to do so from the shipper, or notify the shipper promptly that this has been done.[1] Since there is serious question as to the legality of taking goods on account without prior authority in spite of the alternative offered by the interpretation of this specific law, many of the commission men have sent out letters to their shippers asking for such authority. This law still leaves it optional with the commission man to either sell consigned goods on a commission basis or take them on account — a privilege that is sometimes abused, as explained in Chapter V. Neither does the law prevent the charging of a fictitious commission when goods are actually taken on account; at least the New York

[1] Letter of the New York Commissioner of Agriculture as printed in *New York Produce Review*, Aug. 13, 1913.

receivers continue this practice. The law does not require commission men to report in detail the names of the buyers of a consignment; under such a requirement commission men would have to divulge the names of all their customers, which constitute a part of their "good will" or stock in trade, and it would mean considerable extra trouble and expense. During the first nine months of operation, there were some 200 complaints, 100 of which were against a single firm. Of the other 100, most of which were adjusted successfully, the majority had reference to shipments of eggs.[1]

Many of the laws introduced and passed in other states are based largely on the New York law, except that some are more stringent in requiring larger bonds and in requiring commission men to report in detail the full list of customers to whom consignments are sold. An attempt was made to amend the New York law in 1915 so as to change the fidelity bond to a straight indemnity bond, but this failed largely on account of the argument advanced by the commission men that it would be an injustice to the smaller dealers who could not afford to tie up so much of their capital in this way. On the whole, laws governing commission merchants appear to have a salutary effect. There is of course some question as to the justice of singling out this particular class of business men for special regulation, and, in fact, the Michigan Supreme Court declared such a law unconstitutional in 1907, on the ground that it was

[1] See *New York Produce Review and American Creamery*, March 25, 1914.

class legislation,[1] whereas the Minnesota law has been upheld. It is also reported that during 1915 the Supreme Court of the State of Washington has upheld the commission law in that state.[2] One great difficulty with these laws is that they reach only those cases where goods are sold on consignment, and not those where wholesalers buy outright. It has been shown that in most trades there has been a pronounced tendency to change from the commission to the outright-purchase basis, and most of the abuses aimed at by the commission-dealer laws, such as false returns, reporting goods out of condition, etc., can be practiced by wholesale receivers who buy outright. This is the most serious problem connected with this kind of legislation and it has not been worked out satisfactorily; in fact the whole problem needs more careful study than it has yet received.

State Marketing Departments. — Several states have taken steps to improve marketing methods through the establishment of commissions or departments organized for the purpose of helping farmers to find the best markets, aiding in establishing uniform grades, assisting in the organization of coöperative associations, etc. Of these state departments the New York Department of Foods and Markets, established in 1914, started out on the largest scale and has perhaps attracted the most attention. The law provides for a commissioner of foods and markets at a salary of $6000 a year, who is

[1] See *New York Produce Review and American Creamery*, Sept. 3, 1913, for a short discussion of this point and excerpt from Michigan decision.

[2] *The Packer*, June 19, 1915, p. 20.

given the following powers: To investigate the cost of food production and marketing; to aid in the organization of coöperative societies; to hear complaints and suggestions and to issue subpœnas and compel the attendance of witnesses; to assist in the location and establishment of coöperative markets; to make rules and regulations for the packing, grading, storing, and selling of all foodstuffs; and to establish auction markets at such points in the state as may seem advisable. Governor Glynn of New York state appointed John J. Dillon, publisher of the *Rural New Yorker*, as commissioner in 1914, and he established his office in New York City.

The New York department was established at a time when popular frenzy over the marketing situation had reached its height, and before the forces working for a more moderate and sensible attitude had begun to make themselves felt. The movement which brought about its establishment was founded on a belief that the whole marketing system is economically unsound and that it is disgracefully wasteful and inefficient, as evidenced by the widespread notion that the farmer gets on the average only 35 per cent of the prices finally paid for his products. The marketing problem cannot be approached successfully from this point of view. Since its establishment this department has been giving its attention primarily to the development of large terminal markets in New York City, the plants to be furnished by the railroads and to be operated by huge coöperative companies. In the campaign for subscriptions extravagant promises have been made of lower prices to con-

sumers and higher prices to farmers. It has been shown in a previous chapter that there may be some advantage in having the wholesale trade concentrated in a single building or group of buildings, instead of in entirely separate buildings, provided it is possible to shift a wholesale center to such a plant, but there is no reason to believe that the development of such a market would alter the methods of marketing to any appreciable extent, or that the 7 or 8 per cent of retail prices now taken by wholesale dealers could be reduced so as to appreciably affect either farm prices or consumers' prices. During the legislative session of 1915 the department asked for an appropriation of $250,000; it was granted $15,000. The commissioner, thoroughly sincere and earnest in his endeavors, immediately announced his intention of serving without salary, and to continue his efforts to develop wholesale terminal markets in New York City.

Agitation for a National Marketing Commission. — During 1914 a movement was started by David Lubin, delegate of the United States to the International Institute of Agriculture, recommending the establishment of a national association composed of a central federal commission, and state and local committees, modeled after the *Landwirtschaftsrat* of Germany. This organization is of great importance to agriculture in Germany; it is made up of delegates from provincial chambers of agriculture, and acts as an official advisory board with right of criticism and initiative on all agricultural legislation affecting the whole of the German Empire, and is supported out of the public taxes. In addition to general agricultural subjects, the *Landwirtschaftsrat* super-

vises and directs the marketing of farm products. With some such organization in mind for the United States, there was introduced into the House of Representatives in 1914 a resolution[1] providing for the appointment of a National Marketing Commission to be composed of twenty-nine members, "fifteen of whom shall be farmers and fourteen of whom shall be selected with reference to their eminence in commerce, law, finance, and transportation." It is further provided that this commission shall take the necessary steps to form state, county, and local organizations to become parts of the national marketing organization.

Hearings were held on this resolution, and Mr. Lubin explained the scheme more in detail. The duties of the various organizations he outlined briefly as follows:[2]

> "Under the direction of the national commission and the state commission the county and township committees will make provisions for synchronizing the products ready for the local markets or for transportation. Local sales shall be in (*a*) open-air markets on the plazas; (*b*) indoor markets consisting of sample rooms, pits, or exchanges, and auction rooms; (*c*) the salesrooms shall have two divisions, one for retail selling and another for wholesale selling. The movement and sales of products within the township to be under the direction of the township committee; and if within the county, under direction of the county committee; if within the state, under the direction of the state commission; if outside the state, under the direction of the national commission."

It is assumed by the promoters of this scheme, as indicated both by the wording of the resolution and the

[1] H. J. Res. 344, 63d Congress, 2d Session.

[2] Hearings before the Committee on Agriculture, U.S. House of Representatives, Sept. 14, 1914, pp. 13, 14.

statement of Mr. Lubin, that the marketing of foodstuffs is now controlled by a number of different trusts, and that the whole marketing machinery is inefficient and wasteful in the extreme. When Mr. Lubin was asked if the object was to do away with the commission man and to bring the goods from the farm to the kitchen, he answered,[1] "Yes; what are now known as middlemen will, under this proposed national commission, be but employees of the coöperating farmers."

Senator Duncan U. Fletcher has been made chairman of a propaganda committee to arouse interest that will lead to the adoption of this system. It is but one of many plans that have been suggested for reorganizing the marketing system, but it has received prominence because of its source, and because of the attention that it obtained in Washington. Although Mr. Lubin explains that this scheme will not interfere with the work or functions of the United States Office of Markets and Rural Organization, described below, it is questionable whether any more should be attempted, at least by the Federal Government, than is now being done by that office. There might be some use for a National Marketing Commission, and also for a national farmers' organization, but as for an attempted reorganization of the whole system of marketing, the time is at least premature; in fact one general conclusion reached in this book is that the solution of the marketing problem is not to be found in revolutionary methods, but rather in the improvement of certain features of the present system.

[1] Hearings before the Committee on Agriculture, U. S. House of Representatives, Sept. 14, 1914, p. 11.

The Federal Office of Markets and Rural Organization. — Such improvement in marketing methods as can be brought about must be based on a more intimate knowledge of methods of marketing each specific commodity than is now available. The great need is for research and investigation, in spite of the claims of impatient reformers that we know enough about it already, and that what we need is definite and immediate action. The improvement of marketing methods cannot be brought about by any spectacular epoch-making or revolutionary change, — but rather by patient ferreting out of weaknesses here and there, and gradual application of different remedies first in one place and then in another. Even so, it must be remembered that those who know the most about marketing methods — produce dealers themselves — have for years been earnestly working in this direction through their exchanges and trade associations, and that they have brought the marketing organism to a relatively high state of efficiency. Outsiders who want to improve conditions must learn as much as the wholesalers already know before they are in a position to suggest changes, or before they can command the respect of those whose coöperation would be most helpful in bringing about such changes as may be deemed desirable.

An appreciation of the need for intensive and dispassionate investigation in order to obtain real facts — although it has been slow in coming — has finally developed. The state agricultural colleges, especially those of Minnesota and Wisconsin, were the first to undertake scientific studies of marketing, but on a rela-

tively small scale. By far the most important step in this direction has been taken by the Federal Government through the Office of Markets and Rural Organization of the Department of Agriculture. This office was originally provided for by Congress in 1913 and it was organized in May of that year. To develop the work of this office along sane scientific lines and at the same time to placate both the radical agitators who demand drastic action and the conservative business interests who look on this new phase of governmental activity with suspicion and misgivings, has been and is a difficult task, largely because of the lack of trained men to undertake the work.

By gradual and careful selection of men the Office of Markets is developing a staff of investigators who are doing valuable work, the results of which will form the most important source of detailed information concerning marketing methods in the future. The main branches of work that have been taken up are as follows: cotton handling and marketing; coöperative purchasing and marketing; market surveys, methods, and costs; market grades and standards; city marketing and distribution; transportation and storage; marketing live stock, meats, and animal by-products; business management and accounting in marketing; grain marketing; marketing by parcel post and express; and miscellaneous problems in marketing.[1] The Office of Markets rendered valuable assistance in framing the United States Cotton Futures

[1] See statement of C. J. Brand in *Congressional Record*, Jan. 28, 1915, pp. 2705–2707, and article by the same author in *Annals*, Nov. 1913, pp. 252–259.

Act, the enforcement of which has been placed in its hands. It has also helped in framing other legislation that has been presented to Congress, and is collecting material that will be of great service in this direction in the future. It has grappled with the most important phase of coöperative marketing by making a thorough study of business and accounting methods employed, and by perfecting adequate systems of accounts for farmers' elevators and fruit-shipping associations, which have been given to the public in bulletin form, and which are in successful operation in many organizations. It aims to furnish market information, such as shipments from country points, quantity in transit, market prices, etc., with regard to highly perishable commodities, like strawberries, cantaloupes, etc.

These are but instances of the important work undertaken by the Office of Markets and Rural Organization; only through such an organization can the marketing problem be adequately studied; and only through such methods can accurate and sufficient information be obtained to serve as a basis for a sane program of remedial action in the future.

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A fairly complete compilation of references on marketing, prepared by Dr. C. C. Williamson of the New York City Public Library, may be found in the Report of the Mayor's Market Commission of New York City. The following list contains several of the most valuable sources of information, but even among these there are a number that the student must use with care. The word "*Annals*," as used below, refers to the *Annals of the American Academy of Political and Social Science.* In addition to the specific works and articles referred to below, should be mentioned the annual reports of produce exchanges, such as the New York Produce Exchange and the Chicago Board of Trade, and also the reports of trade associations, such as the National League of Commission Merchants and the Western Jobbers' Association. Important bulletins issued by the Office of Markets and Rural Organization, not listed below, have been issued while this book was in press.

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